

**Methodological recommendations for Summative Assessment**

**on the subject «The English language»**

**Grade 11**

*(natural-mathematical direction)*

Methodological recommendations for Summative Assessment are designed to assist teachers in planning, organising and carrying out Summative Assessment in the subject of «The English language» for the Grade 11 learners of upper secondary level education of the Natural-Mathematical direction on the updated content.

Methodological recommendations are aligned with the Subject Programme and Long-term plan. Summative Assessment in Grade 11 is conducted in Terms 1, 2, 3 and 4.

Summative Assessment Tasks for unit/cross curricular unit will allow teachers to determine the level of the learning objectives achievement planned for the term. Methodological recommendations comprise tasks, assessment criteria with descriptors and marks for conducting Summative Assessment across the unit/cross curricular unit. Also, this document includes possible levels of the learners' academic achievement (rubrics). Tasks with descriptors and marks can be considered as recommendations.

Methodological recommendations are designed for secondary school teachers, school administrations, educational departments' seniors, regional and school coordinators in criteria-based assessment and others.

Free access to the Internet resources such as pictures, cartoons, photos, texts, video and audio materials, etc. have been used in designing these Methodological recommendations.

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## SUMMATIVE ASSESSMENT TASKS FOR TERM 1

### Summative assessment for the unit «Making connections in biology»

<b>Learning objectives</b>	11.2.1 Understand the main points in unsupported extended talk on a wide range of general and curricular topics, including talk on a growing range of unfamiliar topics 11.2.5 Recognize the attitude or opinion of the speaker(s) in unsupported extended talk on a wide range of general and curricular topics, including talk on a growing range of unfamiliar topics 11.3.2 Ask and respond with appropriate syntax and vocabulary to open-ended higher-order thinking questions on a range of general and curricular topics, including some unfamiliar topics
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<b>Assessment criteria</b>	<ul style="list-style-type: none"><li>• Identify the main information</li><li>• Identify speaker's opinion</li><li>• Answer questions with appropriate vocabulary and syntax</li></ul>
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<b>Level of thinking skills</b>	Knowledge and comprehension Application
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<b>Duration</b>	20 minutes
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### Listening

**Task 1.** Listen to a radio programme in which a presenter is talking to a forester about moths and Choose the correct answer to the questions.

Follow the link to listen [https://www.examenglish.com/B2/b2\\_listening\\_environment.htm](https://www.examenglish.com/B2/b2_listening_environment.htm)

1. The caterpillars of the oak processionary moth are harmful to trees because...
  - a. they spread disease
  - b. they eat leaves
  - c. they weaken the wood.
2. The caterpillars of the oak processionary moth...
  - a. cannot harm human health
  - b. can cause minor health problems in humans
  - c. can cause serious health problems in humans
3. The nest of the oak processionary moth caterpillar is...
  - a. a. round and grey, with a diameter of a few centimetres to a couple of feet
  - b. round and grey, and can be seen about 2 feet up the side of a tree
  - c. round and grey, and no bigger than a golf ball
4. Mike blames new insect infestations on...
  - a. imports and climate change
  - b. climate change and new agricultural practices
  - c. imports and new agricultural practices

5. Mike mentions the citrus longhorn beetle as an example of...
  - a. a pest which was contained thanks to government funding
  - b. a pest which was contained thanks to help from the public
  - c. a pest which was not contained due to lack of funding
  
6. Mike recommends logging onto his website in order to...
  - a. see pictures of moths and other pests
  - b. get details of a training programme
  - c. report the health of trees in your local area

## Speaking

**Task 2.** Choose a card and provide your answer on topic. You will have 1 minute to prepare your talk. You should speak at least 2 minutes.

### Card 1

Describe an animal you saw, which you find very interesting.

You should say:

- What it is
- Where you saw it
- What it looks like

### Card 2

Describe an animal that lives in the wild in your country.

You should say:

- What it looks like
- What its habits are
- How it interacts with people
- And say if you think there will be more or less

### Card 3

Describe your favourite animal.

You Should Say:

- What kind of animal it is
- Describe it briefly
- Why you like the animal
- and describe why it is your favourite animal.

### Card 4

Talk about a pet that you or someone you know once had.

You should say:

- what kind of animal it was
- what kind of care it needed
- what you liked/ disliked about it
- and explain why this is a popular type of pet.

### Card 5

Describe your favourite bird.

You should say:

- what it is
- what it looks like
- is it a common bird in your country

Assessment criteria	Task №	Descriptor	Mark
		<i>A learner</i>	
Identify the main information Identify speaker's opinion	1	1. chooses B	1
		2. chooses B	1
		3. chooses A	1
		4. chooses A	1
		5. chooses B	1
		6. chooses B	1
Answer questions with appropriate vocabulary and syntax	2	answers the whole questions on the card;	1
		provides examples and clarification;	1
		pronounces words and phrases clearly;	1
		uses vocabulary words on the topic;	1
		uses an appropriate tense.	1
<b>Total marks</b>			<b>11</b>

**Rubrics for providing information to parents on the results of  
Summative Assessment for the unit «Making connections in biology»**

Learner's name \_\_\_\_\_

Assessment criteria	Level of learning achievements		
	Low	Middle	High
Identify the main information Identify speaker's opinion	Experiences difficulties in choosing an appropriate answer while identifying main idea and speaker's opinion in extended talk.  <input type="checkbox"/>	Makes mistakes in choosing an appropriate answer while identifying main idea and speaker's opinion in extended talks.  <input type="checkbox"/>	Confidently chooses answer while identifying main idea and speaker's opinion in extended talks.  <input type="checkbox"/>
Answer questions with appropriate vocabulary and syntax	Experiences difficulties in answering the questions in a proper tense. Does not answer the most questions on the card. Experiences challenges in demonstrating rich and vivid vocabulary in talking about the topic. Feels troubles to state the point of view.  <input type="checkbox"/>	Makes grammar mistakes in his/her speech. Does not answer some questions on the card. Demonstrates insufficient use of rich and vivid vocabulary. States his/her point of view uncertainly without good reasoning.  <input type="checkbox"/>	Confidently speaks on the topic giving an extended response using appropriate vocabulary and grammar structures. Confidently demonstrates rich and vivid vocabulary in talking about the topic.  <input type="checkbox"/>

## *Transcript*

Presenter: Now, I have with me in the studio today Mike Douglas, who has been out and about earlier this week collecting caterpillars from oak trees, is that right?

Mike: Yes that's right.

Presenter: And I understand that you aren't collecting these caterpillars in order to conserve them, are you?

Mike: Absolutely not. The caterpillars I've been collecting are from a kind of moth called the oak processionary moth. These caterpillars can cause huge amounts of damage to trees – they can strip all the leaves from an oak tree leaving it completely bare, weakening the tree considerably.

Presenter: A whole oak tree?

Mike: Yes, they are extremely destructive. They can also harm humans. Touching them or their nests can give you a nasty rash, and even give you a sore throat, or cause breathing difficulties and eye problems.

Presenter: They sound nasty. How come I've never heard of them before?

Mike: Well, they've been in and around London since 2006. In some parts of west and south west London, unfortunately, we've lost the battle. The moths are here to stay and there's nothing we can do about it. We're working in the area around Croydon, where there's been another outbreak, and we're trying to contain it so it doesn't spread any further.

Presenter: So how do you spot an oak processionary moth?

Mike: Well, the easiest thing to look out for is their nests. These look like a grey wart on the side of a tree. Some are about the size of a golf ball, while larger ones can be up to two feet in diameter.

Presenter: That's huge!

Mike: It is. You can imagine how many caterpillars you can find in a nest that big. The other thing we are doing is setting traps for the moths, between July and September, to attract the adult moths. We're doing this over a 2km area so we can monitor how far the moths are spreading, and make sure they aren't flying beyond where we would expect them to be.

Presenter: Now, I understand that the oak processionary moth is not the only pest that you are worried about.

Mike: No, it's not. There are many hundreds of pests that could have a terrible affect on our wildlife if they are not monitored correctly. As more and more products are brought in from other countries, rather than being produced here in the UK, more and more fungi, beetles, and moths are allowed to travel into new areas, while warmer temperatures are allowing them to survive and flourish where previously they were unable to. It's believed that such pests as these are moving closer to the poles at a rate of around 3km a year. Some insects are moving even faster – at about 10km a year. The Pine processionary moth, for example, is gradually moving north through France and is now breeding close to Paris. We've already had outbreaks in the UK, which we've managed to contain. But if we don't keep up the vigilance, it means that we could see the decline of some of our most important tree species.

Presenter: What can be done about that?

Mike: It's hard. There's very little government funding for this, so we are encouraging the public to be our eyes and ears.

Presenter: How can they do that?

Mike: Well, the public can help us spot these pests while they're in their gardens, in parks, woodlands, generally out and about, and help us control the threats before they become too serious a problem. It's not the first time we've asked the public to do this. Not long ago, there was an outbreak of citrus longhorn beetles, which sometimes arrive on trees and shrubs from Asia, or in packing crates, and a number of these were spotted by vigilant members of the public and the threat was intercepted.

Presenter: And if you're unable to contain the oak processionary moth problem?

Mike: Well, we may well face a real problem. In the 1970s Britain lost all its elm trees to Dutch elm disease, altering the landscape significantly. We could see the same thing happen again.



Presenter: But are the general public really knowledgeable enough to identify what is a tree disease, or a threat to a tree, and what is just – natural dieback?

Mike: No, in most cases not, and that's why we've launched a training programme to train volunteers in what to look out for so that we can put together a national picture of tree health. People who are interested in becoming a volunteer can log onto our website for details of their nearest training programme.

Presenter: Thanks very much indeed, Mike, for coming in to talk to us about this very worthy programme. Now it's time for our weekly ...

**Summative assessment for the unit**  
**«Investigate and report on animal world: bats, eagles, bees and dolphins»**

<b>Learning objectives</b>	11.4.3 Skim a range of lengthy texts with speed to identify content meriting closer reading on a range of more complex and abstract, general and curricular topics 11.5.1 Plan, write, edit and proofread work at text level independently on a wide range of general and curricular topics 11.5.4 Use style and register to achieve an appropriate degree of formality in a wide variety of written genres on general and curricular topics
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<b>Assessment criteria</b>	<ul style="list-style-type: none"><li>• Define and explain facts and opinions</li><li>• Create an outline of a text; create coherent text for a range of purposes</li><li>• Produce a text in a range of styles and genres, the emphasis being on formal and academic writing</li></ul>
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<b>Level of thinking skills</b>	Knowledge and comprehension Application Higher order thinking skills
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<b>Duration</b>	20 minutes
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**Reading**

**Task 1.** Read the following article and answer the questions that follow. Refer to the text to check your answers when appropriate.

**A Mighty Flier by Kelly Hashway**

What is two inches tall, can hover in mid-air, and flies in every direction including backwards? It's not an insect. The answer is the bee hummingbird.

Most hummingbirds are about three to five inches long. But the bee hummingbird is only five centimeters, or approximately two inches, making it the smallest species of bird alive today. Really it isn't bigger than a large insect. But don't let its tiny body fool you. This bird is a fierce flier. It can beat its wings up to 80 times per second. If you ever see one in flight, you'll notice its wings are just a blur to the human eye. Hummingbirds are also the only vertebrates that can hover in one place. Add to that being able to fly backwards and upside down, and these creatures are amazing flying machines.

And being a master flier isn't the only one of the bee hummingbird's talents. The bee hummingbird does a great job performing its part in plant reproduction. During the course of a single day, the bee hummingbird can visit up to 1,500 flowers. And just like a bee, when the bee hummingbird drinks nectar from the flowers, pollen is transferred from the flower to the bird's body. This pollen is carried to the next flower. Transferring pollen from one flower to another helps plants make seeds.

Besides drinking nectar, bee hummingbirds eat insects. In fact, they eat about half their body mass each day. But what's more impressive is that they drink eight times their body mass every day. This is why they live in areas where there are gardens and shrubbery. These tiny birds are found primarily in Cuba, but some have been spotted in Jamaica and Haiti as well.

Despite its size, there's no arguing that the bee hummingbird is a mighty flier.



1. How do hummingbirds help flowering plants?
  - A) They give the flowering plants energy.
  - B) They help flowering plants make seeds and reproduce.
  - C) They build their nests in flowering plants.
  - D) They drink pollen in the flowers.
  
2. The bee hummingbird is about as large as....
  - A) a flea
  - B) a bee
  - C) a dragonfly
  - D) a sparrow
  
3. If you ever see a hummingbird in flight, you may have a difficult time seeing the wings. They would look blurry. Why?
  
4. What do hummingbirds drink?
  - A) pollen
  - B) insects
  - C) flowers
  - D) nectar
  
5. In which countries do bee hummingbirds live?

## Writing

**Task 2.** In the article, “A Mighty Flier,” you learned about the world's smallest bird, the bee hummingbird. Write a short essay in which you compare and contrast the hummingbird to any other type of bird. In your writing, list five ways the hummingbird is similar to other bird you choose. Then, list five ways a hummingbird is different from the other bird.

### You should

- Brainstorm Similarities and Differences
- Use the following organization of the essay
  - an introduction which clearly defines the topic to be covered;
  - the main body, in which the topic is further developed in detail;
  - the conclusion – summary of the topic or a final opinion, recommendation or comment.
  
- Use Words and Short Phrases to Compare
  - like
  - likewise
  - same as
  - as well as
  - also, too
  
- Use Words and Short Phrases to Contrast
  - unlike
  - in contrast to
  - as opposed to
  - different from whereas

Assessment criteria	Task №	Descriptor	Mark
		A learner	
Define and explain facts and opinions	1	1. B. They help flowering plants make seeds and reproduce;	1
		2. C. a dragonfly;	1
		3. The wings beat so fast the human eye cannot see them. (Accept any appropriate answer);	1
		4. D. nectar;	1
		5. Cuba, Jamaica, Haiti (One point is given if all three countries are written);	1
Create an outline of a text; Create coherent text for a range of purposes  Produce a text in a range of styles and genres, the emphasis being on formal and academic writing	2	writes an essay according to the outline;	1
		uses Present Simple Tense correctly;	1
		uses appropriate vocabulary;	1
		lists five ways the hummingbird is similar to other bird;	1
		lists five ways a hummingbird is different from the other bird;	1
		uses words and short phrases to contrast and compare;	1
		uses formal style of writing.	1
<b>Total marks</b>			<b>12</b>

**Rubrics for providing information to parents on the results of Summative Assessment for the unit  
«Investigate and report on animal world: bats, eagles, bees and dolphins»**

Learner's name \_\_\_\_\_

Assessment criteria	Level of learning achievements		
	Low	Middle	High
Define and explain facts and opinions	Experiences challenges in providing an explanation for the questions and interpreting the content of a text.  <input type="checkbox"/>	Experiences some difficulties in providing an explanation for the questions and interpreting the content of a text. Makes mistakes in identifying the right answer in the multiple-choice task and providing explanation for 1) B. They help flowering plants make seeds and reproduce.2) C. a dragonfly, 3) The wings beat so fast the human eye cannot see them, 4) D. nectar,5)Cuba, Jamaica, Haiti, 6)2 grams x 8 = 16 grams  <input type="checkbox"/>	Confidently interprets the content of a text and gives an appropriate explanation. Choose multiple choice answers correctly and write an explanation where possible.  <input type="checkbox"/>
Create an outline of a text; Create coherent text for a range of purposes	Lacks in writing an essay based on the plan, has difficulties in conveying ideas clearly and logically, in using appropriate vocabulary,basic conjunctions and linking words, in using grammar (Present Simple Tense).  <input type="checkbox"/>	Makes mistakes in writing an essay based on the plan, in presenting ideas logically and clearly, in using appropriate vocabulary and grammar (Present Simple Tense), in using basic conjunctions and linking words.  <input type="checkbox"/>	Uses wide range of grammar, vocabulary, basic conjunctions and linking words within the task set, ideas fulfill the requirements of the task.  <input type="checkbox"/>
Produce a text in a range of styles and genres, the emphasis being on formal and academic writing	Experiences difficulties in selecting appropriate language and producing a text in formal and academic writing.  <input type="checkbox"/>	Experiences some difficulties in selecting appropriate language means according to a given genre and register  <input type="checkbox"/>	Confidently produces a text in a range of styles and genres, the emphasis being on formal and academic writing  <input type="checkbox"/>

## SUMMATIVE ASSESSMENT TASKS FOR TERM 2

### Summative assessment for the unit «Human brain»

<b>Learning objectives</b>	11.2.4	Understand implied meaning in unsupported extended talk on a wide range of general and curricular topics, including talk on a growing range of unfamiliar topics
	11.3.3	Explain and justify own and others' point of view on a range of general and curricular topics, including some unfamiliar topics

<b>Assessment criteria</b>	<ul style="list-style-type: none"><li>• Identify hidden meaning of the content</li><li>• Explain own viewpoints, analyze and critically evaluate arguments, viewpoints, attitudes and perspectives</li></ul>
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<b>Level of thinking skills</b>	Knowledge and comprehension Higher order thinking skills
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<b>Duration</b>	20 minutes
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### Listening

**Task 1.** Listen to the interview and choose the four true sentences.

Follow the link to listen <https://learnenglishteens.britishcouncil.org/skills/listening/upper-intermediate-b2-listening/how-improve-your-memory>

### How to improve your memory

1. We all use memory in the same way.
2. We learn to use our memory as soon as we are born.
3. There are two different forms of memorisation.
4. We are taught how to improve our memory in history lessons.
5. Writing shopping lists can improve your memory.
6. Teaching helps us to memorise.
7. We can train our brains to be more effective.
8. We can only use one image at a time as an aid to memorization.

### Speaking

**Task 2.** With a partner, discuss the questions below.

1. What are some activities or skills that were difficult for you at first, but are easy for you now (e.g., riding a bicycle)?
2. Do you agree that exercise improves your mood? Explain.
3. Do you think that exercise helps you study or solve problems more easily? Explain.

Assessment criteria	Task №	Descriptor	Mark
		<i>A learner</i>	
Identify what has been communicated	1	1. We all use memory in the same way.	1
		3. There are two different forms of memorisation.	1
		6. Teaching helps us to memorise.	1
		7. We can train our brains to be more effective.	1
Analyze and critically evaluate arguments, viewpoints, attitudes and perspectives	2	conveys extended opinion;	1
		provides reasoning, examples and evidence;	1
		comments on pair's opinion;	1
		uses a wide range of appropriate vocabulary to give and exchange views;	1
		uses a wide range of grammar structures;	1
		pronounces words and phrases correctly;	1
<b>Total marks</b>			<b>10</b>

**Rubrics for providing information to parents on the results of  
Summative Assessment for the unit «Human brain»**

Learner's name \_\_\_\_\_

Assessment criteria	Level of learning achievements		
	Low	Middle	High
Identify what has been communicated	Experiences challenges in identifying the position of speakers in the content of a conversation.       <input type="checkbox"/>	Makes mistakes in identifying the position of speakers in the content of a conversation. Completes the task with errors: <i>1. We all use memory in the same way.</i> <i>3. There are two different forms of memorisation.</i> <i>6. Teaching helps us to memorise.</i> <i>7. We can train our brains to be more effective.</i>  <input type="checkbox"/>	Confidently identifies the position of speakers in the content of a conversation. Chooses four true sentences correctly.       <input type="checkbox"/>
Analyze and critically evaluate arguments, viewpoints, attitudes and perspectives	Experiences difficulties in maintaining a conversation/speech and making relevant contribution, in demonstrating rich and vivid vocabulary in a talk, in stating point of view. Pronounces words and phrases clearly.       <input type="checkbox"/>	Maintains a conversation/speech and makes relevant contribution irresolutely. Makes mistakes in using rich and vivid vocabulary in a talk. States his/her point of view uncertainly without good reasoning. Makes some mistakes in pronunciation.       <input type="checkbox"/>	Confidently maintains a conversation/speech and makes relevant contribution. Confidently demonstrates rich and vivid vocabulary in a talk. Expresses his/her viewpoints clearly. Pronounces words and expressions correctly.       <input type="checkbox"/>



## Transcript

**Mary:** I'd like to welcome Charles Long to the studio today. Charles has just published an article in New Science journal about memorisation. It's all about how to make our memory function better. Charles, exam time is looming and there'll be lots of teenagers tuning in today. Can you give us some advice about improving our ability to memorise?

**Charles:** Hello! Yes, of course. I'd like to start by talking about the process of memorisation. It's vital that we understand the process if we want to make adjustments to the way we function. We all use memory in the same way. It doesn't matter whether you're a student revising for your finals or an adult standing in the aisle of a supermarket, trying to recall a particular item from a grocery list.

**Mary:** Ha ha! That's me. I always forget to take my list.

**Charles:** You and thousands of other people too, Mary. We learn to use our memory when we are still at nursery school. Young children are naturally very good at working out how to remember things. The tips I'm going to share today are based on the things we used to do to help us remember when we were children. The process of memorisation occurs in two distinct forms. Do you know what they are?

**Mary:** Are they 'long-term memory' and 'short-term memory'?

**Charles:** That's right! But these aren't completely separate concepts. We use a combination of both types of memory when we want to formulate our thoughts and recall information, whether we're trying to remember something from a decade ago or just an hour earlier.

**Mary:** So what tips have you got for improving the quality of our memory?

**Charles:** Right. Let's start with 'association'.

**Mary:** Association?

**Charles:** Yes. We can use word association to remember an idea or a concept. This means choosing a word or phrase you associate with what you are trying to remember. The word needs to be something familiar, that you come into contact with on a daily basis. So, for example, you can use the name of your pet dog to remember a scientific equation. Try it! Read the equation a few times and then say your dog's name again and again. Later, in your science exam, just recall the name and the whole equation should come back to you.

**Mary:** It sounds too good to be true! What else, Charles?

**Charles:** Visualisation is another trick we can use. So you have to visualise an image that is connected to the thing you need to remember. For example, if you want to remember the date that the Berlin Wall came down, you might visualise a picture of a wall with the date written on it in graffiti. The image of the wall becomes an important part of what you will remember. You can use several images in a row to remember things like information in a text or a list of ingredients for a recipe.

**Mary:** Yes, that makes sense.

**Charles:** Singing can help with memorisation too.

**Mary:** Singing?

**Charles:** Yeah. So instead of reading a text aloud, you sing it. Singing is one of most effective and earliest memory tricks that are used for learning new concepts. I used to 'sing' lists of historical facts and dates. It works.

**Mary:** And did you have to sing aloud in your history exams?

**Charles:** Not aloud! But I did used to sing in my head. And I always got good marks for history.

**Mary:** Any more tips, Charles?

**Charles:** Yes! I've saved the best one till last. It's particularly relevant for any students who have tuned in. 'Teach it'.

**Mary:** Teach it? Teach 'what'?

**Charles:** Teach whatever it is that you want to remember. So, if you're studying for an English exam, teach the concepts to someone else. It can be a real person - a friend in a study group is ideal - or it can be a 'pretend' person. You can just imagine someone is listening to you as you teach. Better still, record yourself 'teaching' and then play back the video to revise the material further.

**Mary:** That sounds like a great tip ... or 'trick'.

**Charles:** Yes, it really works because in order to teach something you need to understand it. Teaching reinforces the understanding. And although these sound like 'tricks', they aren't really.

**Mary:** No?

**Charles:** No. They are just simple ways that we can train our brains to be more effective. By getting into the habit of using word association, visualisation, singing and teaching, our brains develop and work better for us. And of course that has a knock-on effect on our memory and our abilities to recall all kinds of data.

**Mary:** Thank you, Charles. Now, I think we've got time for a couple of questions from our listeners.

## Summative assessment for the unit «Investigate and report on timekeeping devices»

<b>Learning objectives</b>	11.4.1 Understand complex and abstract main points in extended texts on a wide range of familiar and unfamiliar general and curricular topics 11.4.7 Recognize patterns of development in lengthy texts [inter-paragraph level] on a range of more complex and abstract general and curricular topics 11.5.1 Plan, write, edit and proofread work at text level independently on a wide range of general and curricular topics
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<b>Assessment criteria</b>	<ul style="list-style-type: none"><li>• Summarize main information from the text</li><li>• Identify the organization of information in the text</li><li>• Create coherent paragraph for a range of purposes; Develop a topic with well-chosen, relevant facts</li></ul>
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<b>Level of thinking skills</b>	Knowledge and comprehension Application
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<b>Duration</b>	20 minutes
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### Reading

**Task 1.** Read the text and be ready to answer the questions.

### Timekeeping: Why We Need Clocks and Calendars

By David Christian, Big History Project, adapted by Newsela staff

All life forms come with their own way of keeping track of time. However, no other species does it better than humans. People have more ways of marking time, and they do it more precisely.

#### Why bother to keep time?

Why do people need clocks and calendars? The answer may seem obvious. People need to know what others are doing and when they are doing it. They also need to know what is happening in nature. People who do not know the time or date will be out of sync with the world.

It is not just modern humans who need to keep track of time. All living things must know the time to adjust to the world as it changes. Plants need to know when to blossom. Birds need to know when to fly south for the winter.

Keeping track of time is very important. It is so important that, over time, humans have developed clocks in their bodies. The body clocks react to daylight and the seasons changing. They tell people not to wake up at 2 am, when it is dark outside.

#### What's different about human time?

Humans track time differently than other creatures. They have found more detailed ways to mark the time. To schedule work and keep track of history, humans have designed sophisticated clocks, calendars, and timetables. It was not always this way.

#### Keeping time in the Paleolithic era

In early societies, it was easy to keep track of the time. Ancient people spent most of their time outside. They could watch the positions of the Sun and the stars.

As early as 100,000 years ago, humans lived in South Africa's Blombos Cave. In the cave, historians found pieces of ochre, an orange/red rock. The rocks had strange marks on them. It is

possible that the marks were used to keep track of passing time. More signs of early calendars come from about 40,000 years later. An American historian became fascinated by marks on ancient objects. He thought some of them were simple calendars. Maybe the marks were tracking the movement of the Moon, he thought.

### **Keeping time in agrarian societies**

Farming societies began to appear about 11,000 years ago. As they grew, they connected with other societies. Now they needed better ways to keep track of time. People who wanted to sell vegetables in a nearby town had to know when the markets were held. People needed calendars that everyone agreed on and shared.

Early calendars were based on the Earth's orbit around the Sun. One way to keep time was to watch the Sun's shadow using sundials. A stick in the ground made a simple sundial.

People also kept time using an invention called an hourglass. It was a glass container with sand inside it. The sand flowed through a narrow hole. People measured time by how long it took the sand to flow into the bottom of the glass.

More complicated tools were used to track how the stars and planets moved. In England, there is an ancient monument made of giant stones called Stonehenge. The stones may have been arranged to keep track of the summer and winter solstices. These events take place twice a year. They mark the days when the Sun reaches its highest and lowest points in the sky.

Ancient people like the Mayans and Romans invented detailed calendars. The calendars divided the year into sections. This helped people keep track of farming and Sun cycles.

### **Toward the modern era**

The German writer Norbert Elias saw a link between societies and clocks. He thought that as societies became larger, people needed better clocks. Bigger societies had more people. To link up their schedules, people had to think about time more carefully.

Improved ways of keeping time were invented in different places. Monks needed to know when to pray, so they developed the ringing of bells. Travelers needed to schedule their movements more carefully. More and more complicated clocks were built. Some used carefully controlled drips of water. Others used falling weights.

In 1714, the British government offered a prize to the first person who could build an accurate clock. The clock would have to keep time within two minutes. Clockmaker John Harrison spent most of his life on the job. He finally won the prize in 1773.

In the 1800s, the invention of railroads and steamships made accuracy even more important. Now many more passengers could travel. More cargo could be shipped. Trains and ships had to leave and arrive on time. The first English train schedule was published in 1839. For the first time, different British cities needed to coordinate their clocks. They agreed on a standard time called Greenwich Mean Time.

The world today requires even greater precision. Atomic clocks were invented to help. They measure time using signals sent by tiny particles called electrons. They are more accurate than any other kind of clock.

Another breakthrough in timekeeping was particularly important for historians. An American scientist discovered a way to tell the age of very old objects. His method allows people to learn about time before humans existed. New dating methods have been developed since then. They can now reach back to the Big Bang, 13.8 billion years ago.

**Answer these questions:**

1. Which sentence from the text BEST summarizes a main idea of the article?
  - A) People have more ways of marking time, and they do it more precisely.
  - B) All living things must know the time to adjust to the world as it changes.
  - C) Ancient people spent most of their time outside.
  - D) Early calendars were based on the Earth's orbit around the Sun.
  
2. What is the MAIN idea of the section "Keeping time in agrarian societies"?
  - A) Farming societies appeared about 11,000 years ago.
  - B) Farming societies needed a way to agree on market days.
  - C) Farming societies used different natural elements to tell time.
  - D) Farming societies built Stonehenge to track the Moon.
  
3. Which of the following answers BEST describes the organization of the article?
  - A) It is a comparison of different items.
  - B) It is in order of different time periods.
  - C) It has different causes and their effects.
  - D) It has different questions and their answers.
  
4. What is the purpose of the section "Toward the modern era"?
  - A) to explain how the first clocks were made
  - B) to prove that clocks took a long time to become popular
  - C) to compare clocks in Britain with clocks in America
  - D) to show that clocks have become increasingly important

**Writing**

**Task 2.** Write a short paragraph that explains the central idea of the article. Use at least two details from the article to support your response.

**You should**

- present a clear strong claim/position with relevant and supported ideas;
  - evidence should be relevant to your claim/position;
  - explain the choice of your evidence (do your analysis)
  - link ideas logically and clearly, using basic conjunctions and linking words;
  - pay attention to spelling;
- use appropriate topical vocabulary.

Assessment criteria	Task №	Descriptor	Mark
		A learner	
Summarize main information from the text Identify the organization of information in the text	1	chooses 1-A People have more ways of marking time, and they do it more precisely.	1
		chooses 2-C Farming societies used different natural elements to tell time.	1
		chooses 3- B It is in order of different time periods.	1
		chooses 4-D to show that clocks have become increasingly important	1
Create coherent paragraph for a range of purposes; Develop a topic with well-chosen, relevant facts	2	presents a clear strong claim/position with relevant and supported ideas;	1
		provides evidence relevant to claim/position;	1
		explains the choice of evidence;	1
		links ideas logically and clearly, using basic conjunctions and linking words;	1
		pays attention to spelling;	1
		uses appropriate topical vocabulary.	1
<b>Total marks</b>			<b>10</b>

**Rubrics for providing information to parents on the results of  
Summative Assessment for the unit «Investigate and report on timekeeping devices»**

Learner's name \_\_\_\_\_

Assessment criteria	Level of learning achievements		
	Low	Middle	High
Summarize main information from the text Identify the organization of information in the text	Experiences challenges in summarizing main information and identifying the organization of information in the text.      <input type="checkbox"/>	Experiences some difficulties in summarizing main information and identifying the organization of information in the text: 1-A People have more ways of marking time, and they do it more precisely. 2-C Farming societies used different natural elements to tell time. 3- B It is in order of different time periods. 4-D to show that clocks have become increasingly important   <input type="checkbox"/>	Confidently finds and interprets the content of a text and gives an appropriate explanation.          <input type="checkbox"/>
Create coherent paragraph for a range of purposes; Develop a topic with well-chosen, relevant facts	Lacks in writing a short paragraph that explains the central idea of the article, has difficulties in presenting a clear position/ claim with relevant and supported ideas, explaining the choice of the evidence, in conveying ideas clearly and logically (basic conjunctions and linking words), in using topical vocabulary.     <input type="checkbox"/>	Makes some typical mistakes in writing a short paragraph that explains the central idea of the article, has some difficulties in presenting a clear position/claim with relevant and supported ideas, explaining the choice of the evidence, in conveying ideas clearly and logically (basic conjunctions and linking words), in using topical vocabulary.     <input type="checkbox"/>	Writes a short paragraph with appropriate structure, presents a clear position claim with relevant and supported ideas. Explains the choice of the evidence successfully. Conveys ideas clearly and logically (with basic conjunctions and linking words). Uses a wide range of topical vocabulary.       <input type="checkbox"/>

## SUMMATIVE ASSESSMENT TASKS FOR TERM 3

### Summative assessment for the unit «Work and inventions»

<b>Learning objectives</b>	11.2.7 Understand speaker viewpoints and extend of explicit agreement between speakers on a range of general and curricular topics, including talk on a growing range of unfamiliar topics
	11.5.2 Use a wide range of vocabulary, which is appropriate to topic and genre, and which is spelt accurately
	11.5.3 Write with grammatical accuracy on a wide range of general and curricular topics

<b>Assessment criteria</b>	<ul style="list-style-type: none"><li>• Identify the speakers' viewpoint</li><li>• Use topic-related vocabulary</li><li>• Use a variety of grammar including some more complex structures</li></ul>
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<b>Level of thinking skills</b>	Knowledge and comprehension Application
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<b>Duration</b>	20 minutes
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### Listening

**Task 1.** You will hear five different people talking about the importance of modern inventions. For questions 1-5, choose from the list A-F the reason each speaker gives for the importance of the invention to them personally. Use the letters only once. There is one extra letter which you do not need to use. *CD2. Tapescript 3.*

- |              |                            |
|--------------|----------------------------|
| 1. Speaker 1 | A. It entertains me        |
| 2. Speaker 2 | B. It guarantees contact   |
| 3. Speaker 3 | C. It helps my memory      |
| 4. Speaker 4 | D. It provides an escape   |
| 5. Speaker 5 | E. It's removed a pressure |
|              | F. It's always with me     |

**Task 2.** Imagine you are in one of the following situations. (choose only one)

1. Rudeness of a waiter/waitress
2. Malfunction of a laptop
3. Wrong size of clothes ordered by the Internet
4. Inappropriate behavior of receptionist

Write a letter complaining to the company and asking for your money back.



Assessment criteria	Task №	Descriptor	Mark
		<i>A learner</i>	
Identify the speakers' viewpoint	1	chooses F	1
		chooses E	1
		chooses D	1
		chooses B	1
		chooses C	1
Use topic-related vocabulary Use a variety of grammar including some more complex structures	2	uses a range of appropriate formal vocabulary;	1
		conveys ideas clearly;	1
		makes an argument and gives reasons;	1
		uses the phrases that express the opinion;	1
		follows the structure of a letter;	1
		writes grammatically correct sentences;	1
		shows a good degree of control of a range of simple and some complex grammatical forms.	1
<b>Total marks</b>			<b>12</b>

**Rubrics for providing information to parents on the results of  
Summative Assessment for the unit «Work and inventions»**

Learner's name \_\_\_\_\_

Assessment criteria	Level of learning achievements		
	Low	Middle	High
Identify the speakers' viewpoint	Experiences difficulties in identifying the speaker's thesis statement or the main idea while listening to the recording.  <input type="checkbox"/>	Experiences some difficulties in identifying the speaker's thesis statement or the main idea while listening to the recording: 1-F; 2-E; 3-D; 4-B;5-C.  <input type="checkbox"/>	Identifies the speaker's thesis statement or the main idea and selects the right answers while listening to the recording.  <input type="checkbox"/>
Differentiate between the formal and informal language registers Use a variety of grammar including some more complex structures	Experiences difficulties in differentiating between the formal and informal language registers. Makes many grammar and spelling mistakes that impede understanding of the piece of writing.  <input type="checkbox"/>	Experiences some difficulties in differentiating between the formal and informal language registers. Writes a letter of complaint but makes some grammar and spelling mistakes that do not impede understanding of the piece of writing.  <input type="checkbox"/>	Demonstrates the ability in differentiating between the formal and informal language registers. Shows a good degree of control of a range of simple and some complex grammatical forms, uses a range of appropriate vocabulary.  <input type="checkbox"/>

## *Transcript*

**Speaker 1** I used to think that television was the most brilliant invention because you could sit in an armchair and have a window on the world. But in the last couple of years I've changed my mind. For me now the best thing ever is the mobile phone. I mean they used to be so heavy and not that attractive to carry around but now they are tiny and light. I never go anywhere without mine – and you can buy personalized covers and even change the covers to match what you're wearing. Some of my friends are so cool they dye their hair to match their phones –and their watch straps as well! I mean, how amazing is that?!

**Speaker 2** There are so many things that I think I couldn't live without, my mum moans at me because I can't be bothered to cook. But I mean, who needs to cook when there are so many take-away places? Nor can I imagine life without radio and TV. But if there's one thing that has made a big difference to my life, it's the cash machine. I can relax about getting money and not rush around trying to get to a bank before it closes. I was always running out of cash but now any time of day or night I can turn up at a hole-in-the-wall, put my card in and magic, there's the money, no hassle!

**Speaker 3** I know there are all sorts of wonderful inventions and it's easy to take everything for granted, like electricity. Life as we know it would be impossible without it. I mean, we depend on it for almost everything. But for me personally, it's the car which I think has massively changed people's lives. I know that holidays in space are more or less a reality now and you can reach any part of the world by plane but it's the ease of the car, the fact that it offers you such freedom. Like, you wake up in the morning and think, "where would I like to go to today?" and you just do it!

**Speaker 4** I think some inventions are such fun. All these computer games, I really love them. And the fact that they're hand-held is great. They help me relax when I'm feeling stressed and take my mind off whatever is worrying me. Although, I suppose I could live without them if I had to. But there's no way I could live without my email. When we all left school last year, I made sure I had everyone's email address and that means we all keep in touch and get to meet up with each other. And if we can't meet, then at least we know each other's news and what we're all doing.

**Speaker 5** I hate being without my electric toothbrush. But I know that's silly because most people use an ordinary toothbrush and never think twice about it. But there is one invention which has really saved my life and that's my electronic diary. My girlfriend bought me one because she got so fed-up with me forgetting arrangements. I have no excuse now for forgetting anything; even her birthday is programmed into it. They used to be dead expensive but now they've come down in price and I use mine all the time.

## Summative assessment for the units «STEM» and «Reading for Pleasure»

<b>Learning objectives</b>	11.4.6	Recognise the attitude, opinion and tone of the writer in extended texts on a range of more complex and abstract general and curricular topics
	11.3.4	Evaluate and comment on the views of others in a growing variety of talk contexts on a wide range of general and curricular topics, including some unfamiliar topics
	11.3.6	Navigate talk and modify language through paraphrase and correction in talk on a wide range of familiar and some unfamiliar general and curricular topics

<b>Assessment criteria</b>	<ul style="list-style-type: none"><li>• Identify the author's intention in text</li><li>• Analyze and critically evaluate arguments, provide opinions using appropriate vocabulary and grammar structures</li><li>• Give a full extended response maintaining control, improving fluency and accuracy of speaking using appropriate vocabulary and grammar structures</li></ul>
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<b>Level of thinking skills</b>	Knowledge and comprehension Application
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<b>Duration</b>	20 minutes
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### Reading

**Task 1.** Read the article and be ready to answer the questions.

#### **New solar panels can produce power from both the sun and rain**

Solar panels need the sun in order to make electricity. A new solar panel, however, also creates electricity from falling rain. It produces power even when it is cloudy or the sun has set.

More and more people are using solar energy. The costs have gone down almost 90 percent in the last 10 years. In many parts of the world, it is the cheapest form of electricity. However, the solar power output can fall under gray skies. Scientists are working to squeeze even more electricity from the panels.

Scientists demonstrated the new solar panel at Soochow University in China. The panel has two new polymer layers on top of a regular solar panel cell. The polymers are thin and are like plastic. They make electricity when raindrops roll off of them. The electricity comes from the water rubbing against the surface.

“Our device can always generate electricity in any daytime weather,” said Baoquan Sun, a scientist at Soochow University. “In addition, this device even provides electricity at night if there is rain.”

#### **Adding Tengs To Solar Panels**

Other scientists have recently added new devices to solar panels. The new devices are called Tengs. The Soochow design is much simpler, however. One of the polymer layers carries electricity for both the Teng and the solar cell. This means the device is much lighter than others.

“Due to our unique device design, it becomes a lightweight device,” said Sun. His team wants to build the panels into soft things like electronic clothing. However, the scientists still need to improve the panel's electrical output. Sun wants to produce a model of his new solar cell in three to five years.

Other scientists in China have also used Tengs on solar cells. These Tengs harvest some power from the wind, an approach Sun said could be added to his device.

Varun Sivaram works for the Council on Foreign Relations in the United States. He has also written a book on solar power. He thinks Sun's idea is interesting and likes that one source of energy, water, does not hurt the other.

#### Rain Doesn't Produce Much Power

However, Sivaram said the power from falling rain needs to be much higher. Right now, it does not really change how much power the panel creates. "It's really not clear whether this is a big deal or not – I suspect it's not."

Professor Keith Barnham teaches at Imperial College London. He said the new rain-powered device has some advantages. It is small and works well. However, he pointed out that wind power would probably work better with the solar panels. "Wind power is clearly the most effective and complementary power source to PV – and it works equally well in the rain!"

Solar panels may one day be made out of softer material. Scientists are also studying artificial photosynthesis. Artificial photosynthesis uses sunlight to produce liquid and gas fuels.

1. Read the introduction [paragraphs 1-4].

Which selection explains a problem with regular solar panels?

- A) More and more people are using solar energy. The costs have gone down almost 90 percent in the last 10 years. In many parts of the world, it is the cheapest form of electricity.
- B) However, the solar power output can fall under gray skies. Scientists are working to squeeze even more electricity from the panels.
- C) Scientists demonstrated the new solar panel at Soochow University in China. The panel has two new polymer layers on top of a regular solar panel cell.
- D) The polymers are thin and are like plastic. They make electricity when raindrops roll off of them. The electricity comes from the water rubbing against the surface.

2. Read the section "Adding Tengs To Solar Panels."

Which sentence explains HOW the Soochow design is different from the Teng device?

- A) Other scientists have recently added new devices to solar panels.
- B) One of the polymer layers carries electricity for both the Teng and the solar cell.
- C) Sun wants to produce a model of his new solar cell in three to five years.
- D) Other scientists in China have also used Tengs on solar cells.

3. What do Baoquan Sun and Keith Barnham AGREE on in the article?

- A) Sun's new solar panels are powerful enough.
- B) Wind power is the most effective power source.
- C) The small size of the new panel is an advantage.
- D) Solar power is the most effective power source.

4. Read the paragraph below from the section "Adding Tengs To Solar Panels."

*"Due to our unique device design, it becomes a lightweight device," said Sun. His team wants to build the panels into soft things like electronic clothing. However, the scientists still need to improve the panel's electrical output. Sun wants to produce a model of his new solar cell in three to five years.*

What is Baoquan Sun's point of view on solar energy?

- A) He believes that his solar panels are better than the Teng devices.
- B) He believes that solar energy is more useful than wind energy.
- C) He believes that the panel's current electrical output is good enough.
- D) He believes scientists should continue working to make solar energy better.

## Speaking

**Task 2.** Discuss the article “Solar Energy” which you have read, analyzed and annotated at home. Be ready to support the conversation and answer the questions of your peers. Produce a speech by giving extended answers to the questions.

Share your ideas with the class. Follow the rules of Socratic Seminar.

- a. Contribute to the whole discussion actively
- b. Provide evidence to support your ideas
- c. Ask questions for clarification
- d. Do not need to raise your hand to speak
- e. Pay attention to your “airtime”
- f. Do not interrupt
- g. Do not “put down” the ideas of others

## Solar Energy

As the world becomes more polluted by fossil fuels, people are looking for alternatives to these non-renewable resources of energy. Many alternatives exist but they all have disadvantages and drawbacks. Solar energy is one alternative source for future energy. Over the course of the next century, solar energy may have a large impact on the world energy market.

Solar energy is the most abundant form of energy known. The sun releases energy at a rate 15,000 times greater than the rate that the earth uses energy. Solar energy can be used to produce clean, cheap electricity in amazing amounts.

In the early 1990s lower prices for fossil fuels, coupled with government subsidies, helped to make fossil fuels appear more economical than renewable fuels. The United States government hoped to develop new technologies so they launched a research and development project headed by the Department of Energy. This research has begun to pay off because of lower prices for light- and heat-collecting solar cells, as well as higher storage capacity of those cells.

Solar cells release far less pollution than fossil fuels. With lower emissions, the greenhouse effect can be slowed and global warming nearly stopped. These advantages are some reasons people may begin building more solar power plants in the near future. The price for solar plants has continued to drop while fossil fuels are being continually depleted. Eventually, this constant depletion will raise the price of coal, natural gas, and petroleum.

One argument against solar power is the cost of the initial start-up. Building solar power plants is very expensive. However, the plants require almost no maintenance, clean up, or dumping of waste. This helps to offset start-up costs. Some experts argue that a solar plant can practically pay for itself after two or three years.

Experts from the United States and Canada have said that solar energy could play a part in changing our lives in the twenty-first century. If solar power use increases and emissions decrease, solar energy and other alternative fuels could supply more and more of our everyday electricity needs. Environmentalists argue that we should power our homes with solar power and other cleaner sources of energy instead of polluting them with fossil fuels or dumping nuclear waste into the environment.

**Comprehension Questions:**

1. What is polluting the world?
2. What are people looking for?
3. What is an alternative source of future energy?
4. What is the most abundant source of energy known?
5. What happened in the early 1990s?
6. Who hoped to develop new technologies?
7. Do fossil fuels release more pollution than solar cells?
8. What are some advantages of solar power?
9. Has the price for solar power plants gone up or down?
10. Why might the price for fossil fuels go up?
11. What is one argument against solar power?
12. What helps offset start-up costs of solar power plants?
13. Who says solar power may change our lives in the 21st century?
14. What do environmentalists argue?
15. What could happen if solar power use increases?

**Discussion Questions:**

1. Do you think solar power is a good alternative source of energy? Why?
2. What are some other alternative sources of energy?
3. What is nuclear power?
4. Do you think nuclear power is generally safe or dangerous?
5. Are there nuclear power plants in your country?
6. How would you feel if a nuclear power plant was built near your home?
7. What do you think about hydropower? Is it a good idea? Why?
8. What are some ways people waste energy? Do you ever waste energy? How?
9. Should governments be responsible for developing alternative energy resources?
10. What can you do to promote alternative sources of energy?
11. Are you ever bothered by air pollution? Why?

<https://www.stickyball.net/?s=Solar+energy>

Assessment criteria	Task №	Descriptor	Mark
		<i>A learner</i>	
Identify the author's intention in text	1	B) However, the solar power output can fall under gray skies. Scientists are working to squeeze even more electricity from the panels.	1
		B) One of the polymer layers carries electricity for both the Teng and the solar cell.	1
		C) The small size of the new panel is an advantage.	1
		D) He believes scientists should continue working to make solar energy better.	1
Analyze and critically evaluate arguments, provide opinions using appropriate vocabulary and grammar structures  Give a full extended response maintaining control, improving fluency and accuracy of speaking using appropriate vocabulary and grammar structures	2	responds considering different perspectives;	1
		provides evidence to support answer;	1
		evaluates and critically analyzes different perspectives;	1
		uses more complex and compound grammar structures ;	1
		uses sophisticated vocabulary;	1
		asks topic related and supporting questions, paraphrase them if necessary;	1
		applies paraphrasing techniques in communication;	1
responds with fluency and spontaneity.	1		
<b>Total marks</b>			<b>12</b>



**Rubrics for providing information to parents on the results of  
Summative Assessment for the unit «STEM» and «Reading for pleasure»**

Learner's name \_\_\_\_\_

Assessment criteria	Level of learning achievements		
	Low	Middle	High
Identify the author's intention in text	Experiences difficulties in evaluating the author's intention in paragraph while reading the text. The answers are incorrect.  <input type="checkbox"/>	Experiences some difficulties in evaluating the author's intention in paragraph while reading the text. Answers all questions, but not all answers are correct:  <input type="checkbox"/>	Confidently evaluates the author's intention in paragraphs and supports the answer with the evidence while reading the text.  <input type="checkbox"/>
Analyze and critically evaluate arguments, provide opinions using appropriate vocabulary and grammar structures  Give a full extended response maintaining control, improving fluency and accuracy of speaking using appropriate vocabulary and grammar structures	Experiences difficulties in maintaining a speech and making relevant contribution, in demonstrating rich and vivid vocabulary in a talk, in stating point of view. Pronounces words and phrases clearly.  <input type="checkbox"/>	Maintains a speech and makes relevant contribution irresolutely. Makes mistakes in using rich and vivid vocabulary in a talk. States his/her point of view uncertainly without good reasoning. Makes some mistakes in pronunciation.  <input type="checkbox"/>	Confidently maintains a conversation/speech and makes relevant contribution. Confidently demonstrates rich and vivid vocabulary in a talk. Expresses his/her viewpoints clearly. Pronounces words and expressions correctly.  <input type="checkbox"/>

**SUMMATIVE ASSESSMENT TASKS FOR TERM 4**  
**Summative assessment for the unit «Recent advances in technology »**

- Learning objectives**
- 11.2.2 Understand specific information in unsupported extended talk on a wide range of general and curricular topics, including talk on a growing range of unfamiliar topics
  - 11.5.7 Use independently appropriate layout at text level on a wide range of general and curricular topics
  - 11.5.5 Develop with minimal support coherent arguments supported when necessary by examples and reasons for a wide range of written genres in familiar general and curricular topics

- Assessment criteria**
- Identify detailed information from recording
  - Produce a text with appropriate paragraphing
  - Write a coherent paragraph/short text stating and explaining an argument

- Level of thinking skills**
- Knowledge and comprehension
  - Application
  - Higher order thinking skills

**Duration** 20 minutes

**Listening**

**Task 1.** Listen to the recording about uses of nanotechnology and complete the notes below. Write **ONE WORD ONLY** for each answer.

Follow the link to listen <https://www.youtube.com/watch?v=a714mjyOaI>

**Uses of Nanotechnology**

**Transport**

1. Nanotechnology could allow the development of stronger \_\_\_\_\_  
Planes would be much lighter in weight.
2. \_\_\_\_\_ travel will be made available to the masses.

**Technology**

3. Computers will be even smaller, faster, and will have a greater \_\_\_\_\_
4. \_\_\_\_\_ will become more affordable.

**The Environment**

- Nano-robots could rebuild the ozone layer.
5. Pollutants such as \_\_\_\_\_ could be removed from water more easily.
  6. There will be no \_\_\_\_\_ from manufacturing.

**Health and Medicine**

- New methods of food production could eradicate famine.
7. Analysis of medical \_\_\_\_\_ will be speeded up.  
Life expectancy could be increased.

## **Writing**

**Task 2.** Write an essay about the following topic:

*In the past lectures were the traditional method of teaching large numbers of students. Nowadays new technology is increasingly being used to teach students.  
What are the advantages and disadvantages of this new approach?*

### **You should:**

- paraphrase the question;
- present the specific advantages/disadvantages that will be discussed in the main body paragraphs;
- introduce the main advantage, explain and support with examples;
- introduce the main disadvantage, explain and support with examples;
- give a summary of your main points and say what you think were most important pros and cons;
- link ideas logically and clearly, using basic conjunctions and linking words;
- use appropriate topical vocabulary.

Assessment criteria	Task №	Descriptor	Mark
		<i>A learner</i>	
Identify detailed information from recording	1	1. writes 'metal/metals'	1
		2. writes 'space'	1
		3. writes 'memory'	1
		4. writes 'solar'	1
		5. writes 'oil'	1
		6. writes 'waste'	1
		7. writes 'tests'	1
Produce a text with appropriate paragraphing Write a coherent paragraph/short text stating and explaining an argument	2	uses appropriate structure that makes reader understand a piece;	1
		uses a range of appropriate vocabulary with correct spelling;	1
		writes clear paragraphs with 3 or 4 basic connectors;	1
		states and explains an argument;	1
		conveys ideas clearly;	1
		presents the specific advantages/disadvantages;	1
		use appropriate topical vocabulary.	1
<b>Total marks</b>			<b>14</b>

**Rubrics for providing information to parents on the results of  
Summative Assessment for the unit «Recent advances in technology»**

Learner's name \_\_\_\_\_

Assessment criteria	Level of learning achievements		
	Low	Middle	High
Identify detailed information from recording	Experiences difficulties in giving the right answers while listening. The answers are not full or correct.  <input type="checkbox"/>	Experiences some difficulties in giving the right answers while listening. Answers all questions but there are some spelling mistakes or not correct answers: Writes 1. 'metal/metals'; 2. 'space';3. 'memories';4. 'solar';5. 'oil'; 6. 'waist';7. 'tests'  <input type="checkbox"/>	Confidently chooses an appropriate word for each gap while identifying specific details in extended talks.  <input type="checkbox"/>
Produce a text with appropriate paragraphing Write a coherent paragraph/short text stating and explaining an argument	Lacks in writing academic essays, has difficulties in conveying ideas logically into coherent paragraphs, stating and explaining arguments. Experiences difficulties in using appropriate vocabulary, in linking ideas clearly, in using a range of grammar.  <input type="checkbox"/>	Makes some mistakes in structure and style of academic essays. Experiences some difficulties in presenting ideas clearly, in using appropriate vocabulary and grammar, in linking ideas logically.  <input type="checkbox"/>	Uses wide range of grammar and vocabulary within the task set, ideas fulfill the requirements of the task.  <input type="checkbox"/>

## *Transcript*

Today we're going to look at an important area of science, namely nanotechnology. So what is it? Nano means tiny, so it's science and engineering on the scale of atoms and molecules. The idea is that by controlling and rearranging atoms, you can literally create anything. However, as we'll see, the science of the small has some big implications affecting us in many ways.

There's no doubt that nanotechnology promises so much for civilisation. However, all new technologies have their teething problems. And with nanotechnology, society often gets the wrong idea about its capabilities.

Numerous science-fiction books and movies have raised people's fears about nanotechnology - with scenarios such as inserting little nano-robots into your body that monitor everything you do without you realising it, or self-replicating nano-robots that eventually take over the world.

So how do we safeguard such a potentially powerful technology? Some scientists recommend that nano-particles be treated as new chemicals with separate safety tests and clear labelling.

They believe that greater care should also be taken with nano-particles in laboratories and factories. Others have called for a withdrawal of new nano products such as cosmetics and a temporary halt to many kinds of nanotech research.

But as far as I'm concerned there's a need to plough ahead with the discoveries and applications of nanotechnology.

I really believe that most scientists would welcome a way to guard against unethical uses of such technology. We can't go around thinking that all innovation is bad, all advancement is bad. As with the debate about any new technology, it is how you use it that's important. So let's look at some of its possible uses.

Thanks to nanotechnology, there could be a major breakthrough in the field of transportation with the production of more durable metals.

These could be virtually unbreakable, lighter and much more pliable leading to planes that are 50 times lighter than at present. Those same improved capabilities will dramatically reduce the cost of travelling into space making it more accessible to ordinary people and opening up a totally new holiday destination.

In terms of technology, the computer industry will be able to shrink computer parts down to minute sizes. We need nanotechnology in order to create a new generation of computers that will work even faster and will have a million times more memory but will be about the size of a sugar cube.

Nanotechnology could also revolutionise the way that we generate power. The cost of solar cells will be drastically reduced so harnessing this energy will be far more economical than at present.

But nanotechnology has much wider applications than this and could have an enormous impact on our environment. For instance, tiny airborne nano-robots could be programmed to actually rebuild the ozone layer, which could lessen the impact of global warming on our planet. That's a pretty amazing thought, isn't it? On a more local scale, this new technology could help with the clean-up of environmental disasters as nanotechnology will allow us to remove oil and other contaminants from the water far more effectively. And, if nanotechnology progresses as expected - as a sort of building block set of about 90 atoms - then you could build anything you wanted from the bottom up. In terms of production, this means that you only use what you need and so there wouldn't be any waste.

The notion that you could create anything at all has major implications for our health. It means that we'll eventually be able to replicate anything. This would have a phenomenal effect on our society. In time it could even lead to the eradication of famine through the introduction of machines that produce food to feed the hungry.

But it's in the area of medicine that nanotechnology may have its biggest impact. How we detect disease will change as tiny biosensors are developed to analyse tests in minutes rather than days.

There's even speculation nano-robots could be used to slow the ageing process, lengthening life expectancy.

As you can see, I'm very excited by the implications that could be available to us in the next few decades. Just how long it'll take, I honestly don't know.

## Summative assessment for the unit «The clothes of chemistry»

<b>Learning objectives</b>	11.4.9 Recognise inconsistencies in argument in extended text on a range of more complex and abstract general and curricular topics 11.3.5 Interact with peers to make hypotheses and evaluate alternative proposals on a range of familiar and some unfamiliar general and curricular topics 11.3.7 Use appropriate subject-specific vocabulary and syntax to talk about a range of familiar and some unfamiliar general and curricular topics
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<b>Assessment criteria</b>	<ul style="list-style-type: none"><li>• Identify inconsistencies in argument of reading passage</li><li>• Analyze and critically evaluate arguments, provide opinions using appropriate vocabulary and grammar structures</li><li>• Support a talk with peers while agree, disagree and discuss the order of actions and plans to fulfil the tasks</li><li>• Give a full extended response maintaining control, improving fluency and accuracy of speaking using appropriate vocabulary and grammar structures</li></ul>
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<b>Level of thinking skills</b>	Knowledge and comprehension Application
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<b>Duration</b>	20 minutes
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### Reading

**Task 1.** Read the text and select if the statements below are TRUE, FALSE or NOT GIVEN.

#### Trends in the Indian fashion and textile industries

At the beginning of the 21st century, with new designers and models, and more sensible designs, India has witnessed acceleration of fashion industry. As far as the global fashion industry is concerned, Indian ethnic designs and materials are currently in demand from fashion houses and garment manufacturers. India is the third largest producer of cotton, the second largest producer of silk, and the fifth largest producer of man-made fibres in the world.

The Indian garment and fabric industries have many fundamental advantages, in terms of a cheaper, skilled work force, cost-effective production, raw materials, flexibility, and a wide range of designs with sequins, beadwork, and embroidery. In addition, that India provides garments to international fashion houses at competitive prices, with a shorter lead-time, and an effective monopoly on certain designs, is accepted the whole world over. India has always been regarded as the default source in the embroidered garments segment, but changes in the rate of exchange between the rupee and the dollar has further depressed prices, thereby attracting more buyers. So the international fashion houses walk away with customised goods, and craftwork is sold at very low rates.

As far as the fabric market is concerned, the range available in India can attract as well as confuse the buyer. Much of the production takes place in the small town of Chapa in the eastern state of Bihar, a name one might never have heard of. Here fabric-making is a family industry; the range and quality of raw silks churned out here belie the crude production methods and equipment. Surat in Gujarat, is the supplier of an amazing set of jacquards, moss crepes and georgette sheers -

all fabrics in high demand. Another Indian fabric design that has been adopted by the fashion industry is the ‘Madras check’, originally utilised for the universal lungi, a simple lower-body wrap worn in southern India. This design has now found its way on to bandannas, blouses, home furnishings and almost anything one can think of.

Ethnic Indian designs with batik and hand-embroidered motifs have also become popular across the world. Decorative bead work is another product in demand in the international market. Beads are used to prepare accessory items like belts and bags, and beadwork is now available for haute couture evening wear too.

1. At the start of the 21st century, key elements in the Indian fashion industry changed. \_\_\_\_\_
2. India now exports more than half of the cotton it produces. \_\_\_\_\_
3. Conditions in India are generally well suited to the manufacture of clothing. \_\_\_\_\_
4. Indian clothing exports have suffered from changes in the value of its currency. \_\_\_\_\_
5. Modern machinery accounts for the high quality of Chapa’s silk. \_\_\_\_\_
6. Some types of Indian craftwork which are internationally popular had humble origins. \_\_\_\_\_

## Speaking

**Task 2.** Choose the question from the card on the topics “The cloth of chemistry”, “Recent advances in technology”, “Future careers” and be ready to answer it after the teacher starts the conversation. Produce a speech by giving extended answers to the questions. Share your ideas with the class

*Teacher organizes a Socratic seminar, which helps him/her to assess learners while they are speaking on the topics and he/she prepares and cuts down questions and expressions beforehand. Learners sit in a circle and answer the question using in their speech some formal and informal expressions to present logically connected information to their classmates. Learners discuss questions in a class. They share their opinions, ask questions, and comment on classmates’ speech.*

Stating an opinion	Expressing agreement	Expressing disagreement	Interrupting
The way I see it.....	You have a point there	That’s not always the case	Sorry to interrupt, but...
If you want my honest opinion.....	That’s exactly how I feel	I’d say the exact opposite	If I might add something.....
As far as I’m concerned....	I was just going to say that	No, I’m not so sure about that	Is it okay if I jump in for a second?
If you ask me.....	I have to side with smb (name)on this one	I beg to differ	Can I add something here?
In my opinion.....	That’s for sure	Not necessarily	Can I throw my two cents in?



### **These are some Socratic Seminar Ground Rules:**

1. Speak so that all students can hear you.
2. Ask for clarification. Don't stay confused.
3. Speak without raising hands.
4. Stick to the point under discussion.
5. Don't interrupt.
6. Don't put down the ideas of another learner.

### Questions for Socratic Seminar:

1. What do you think of the fashion industry?
2. How does fashion affect people's lives?
3. Do you think fashions changed as quickly in the past as today? Why or why not?
4. If you were a fashion designer, what kind of clothes would you design?
5. Do you read e-books? What are their advantages and disadvantages when compared with paper books?
6. Is there an electronic product you want these days? What is it? How will it make your life better?
7. Do you play computer games? What do you say to people who believe they are a waste of time?
8. What crazy future technology are you looking forward to? For example, flying cars or personal robots.
9. Many science fiction movies present a dark vision of the future. Are you optimistic or pessimistic about the future of humanity?
10. Do you think job satisfaction is more important than salary when choosing a job?
11. What skills do you think are needed to get a good job these days?
12. How has technology changed the way we work?
13. What jobs do you think are most valuable to society?

Assessment criteria	Task №	Descriptor	Mark
		<i>A learner</i>	
Identify inconsistencies in argument of reading passage	1	1. chooses 'TRUE'	1
		2. chooses 'NOT GIVEN'	1
		3. chooses 'TRUE'	1
		4. chooses 'FALSE'	1
		5. chooses 'FALSE'	1
		6. chooses 'TRUE'	1
Analyze and critically evaluate arguments, provide opinions using appropriate vocabulary and grammar structures Support a talk with peers while agree, disagree and discuss the order of actions and plans to fulfil the tasks Give a full extended response maintaining control, improving fluency and accuracy of speaking using appropriate vocabulary and grammar structures	3	responds considering different perspectives;	1
		provides evidence to support answer;	1
		evaluates and critically analyzes different perspectives;	1
		uses more complex and compound grammar structures ;	1
		uses sophisticated vocabulary;	1
		asks topic related and supporting questions, paraphrase them if necessary;	1
		applies paraphrasing techniques in communication;	1
responds with fluency and spontaneity.	1		
<b>Total marks</b>			<b>21</b>

Reading: the text was taken from <https://mini-ielts.com/704/reading/trends-in-the-indian-fashion-and-textile-industries>

**Rubrics for providing information to parents on the results of  
Summative Assessment for the unit «The clothes of chemistry»**

Learner's name \_\_\_\_\_

Assessment criteria	Level of learning achievements		
	Low	Middle	High
<p>Realize particular facts and parts in reading passage</p> <p>Identify and evaluate chosen statements</p>	<p>Experiences difficulties in realizing particular facts and parts in reading passage.</p> <p>Experiences difficulties in identifying chosen statements. <input type="checkbox"/></p>	<p>Makes mistakes in identifying facts and parts in reading passage. <input type="checkbox"/></p>	<p>Feels confidence in identifying facts, parts and chosen statements in the reading passage. <input type="checkbox"/></p>
<p>Analyze and critically evaluate arguments, provide opinions using appropriate vocabulary and grammar structures</p> <p>Support a talk with peers while agree, disagree and discuss the order of actions and plans to fulfil the tasks</p> <p>Give a full extended response maintaining control, improving fluency and accuracy of speaking using appropriate vocabulary and grammar structures</p>	<p>Experiences difficulties in maintaining a speech and making relevant contribution, in demonstrating rich and vivid vocabulary in a talk, in stating point of view. Pronounces words and phrases clearly. <input type="checkbox"/></p>	<p>Maintains a speech and makes relevant contribution irresolutely. Makes mistakes in using rich and vivid vocabulary in a talk. States his/her point of view uncertainly without good reasoning. Makes some mistakes in pronunciation <input type="checkbox"/></p>	<p>Confidently maintains a conversation/speech and makes relevant contribution. Confidently demonstrates rich and vivid vocabulary in a talk. Expresses his/her viewpoints clearly. Pronounces words and expressions correctly. <input type="checkbox"/></p>

