

Nicholas County Middle School: NTI Days

7th Grade Packet

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Day 1:

Math	Social Studies	English	Science
		The Song of Wandering Aengus poem and comprehension questions.	Naturally Selected to Survive article and comprehension questions.

Day 2:

Math	Social Studies	English	Science
		History of Planet Earth article and comprehension questions.	Selective Breeding article and comprehension questions.

Day 3:

Math	Social Studies	English	Science
		As Time Flies By article and comprehension questions.	Genetic Basis of Butterflies article and comprehension questions.

Day 4:

Math	Social Studies	English	Science
		Puppet Power article and comprehension questions	Worldwide Loss of Bees article and comprehension questions.

Day 5:

Math	Social Studies	English	Science
		That Tickles article and comprehension questions.	Human Microbiome article and comprehension questions.

7th Grade English

NTI Instructions

For each day, complete one reading passage or the paired passages and the questions that accompany it.

After an NTI day, you will have THREE (3) days to turn your work in for a grade. No exceptions will be made.

How to reach your teacher on NTI days if you have questions:

- Phone: call the school: 859-289-3780.
- Email: elizabeth.mccord@nicholas.kyschools.us
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And kiss her lips and take her hands;
And walk among long dappled grass,
And pluck till time and times are done,
The silver apples of the moon,
The golden apples of the sun.

Comprehension Questions

1. *Where does the speaker of the poem go?*

- A. *to the moon*
- B. *to a hazel wood*
- C. *to the sun*
- D. *to the bottom of a stream*

2. *What does the second stanza of the poem describe?*

- A. *a glimmering girl*
- B. *an old wanderer*
- C. *a trout in a stream*
- D. *a white moth in flight*

3. *The speaker is not feeling well at the beginning of the poem.*

What evidence from the poem supports this conclusion?

- A. *"I went out to the hazel wood" (line 1)*
- B. *"a fire was in my head" (line 2)*
- C. *"I dropped the berry in a stream" (line 7)*
- D. *"I went to blow the fire a-flame" (line 10)*

4. Who is probably the speaker of the poem?

- A. a young man who likes to pick the silver apples of the moon
- B. wandering Aengus
- C. a glimmering girl
- D. a young woman who likes to pick the golden apples of the sun

5. What is the theme of the poem?

- A. contentment or peace
- B. charity or thanks
- C. longing or desire
- D. resentment or hate

6. What is the effect of the words “flickering out” (line 6) and “glimmering” (line 13)?

- A. They hint at what is going to happen at the very end of the poem.
- B. They create a powerful image in the reader’s mind.
- C. They show how upset and troubled the speaker is.
- D. They slow down the meter of the poem with long syllables.

7. Read these lines from the poem:

I dropped the berry in a stream
And caught a little silver trout.
When I had laid it on the floor
I went to blow the fire a-flame, (10)
But something rustled on the floor,
And someone called me by my name:

What does the word “it” in line 9 refer to?

- A. “the berry” (line 7)
- B. “a stream” (line 7)

C. *the "trout" (line 8)*

D. *"the floor" (line 9)*

8. Where has the speaker wandered?

9. Name three things the speaker will do.

10. Identify the mood of the poem and explain what the poet does to create this mood.

The History of Planet Earth

Our planet is no spring chicken. The history of the earth stretches over billions of years. In that time period, a lot has changed. Some of those changes took place over a very long time, too slowly and gradually for people to discern. Some changes, on the other hand, took place very quickly.

Water, wind and ice slowly shape the surface of the earth, constantly moving all around us. Activity just beneath the surface of the earth's crust creates rapid changes in the shape of the land—that's where we get volcanoes, landslides and earthquakes.

Glaciers, which are huge, very old formations made out of water, earth and ice, can even change the size and shape of the oceans. These major shifts take place over millions of years. We can see the results, but apart from measuring them and seeing where growth or change took place, we can't observe these changes as they occur. They simply happen too slowly.

Erosion is an example of a slow process that changes the surface of the earth. Think of a windy beach, how sand from the beach is carried toward the dunes or, depending on the behavior of the wind, how the sand from the dunes is carried further down the beach. We can see and feel the sand moving over the land and through the air, but the long-term effects of that movement won't be visible for years.

The earth's surface is also made up of very slowly moving parts, called tectonic plates. These plates fit like puzzle pieces and make up the outermost layer of the planet. When this layer moves around, it can cause earthquakes and volcanic eruptions. It's very easy to spot these changes as they're happening! In fact, we have to be very careful and prepare for them in advance, and take safety measures before and after they occur.

Volcanoes, earthquakes and landslides aren't everyday events. If they were, we'd be in big trouble! Ordinarily, the movement of the plates is extremely slow, yet very powerful. Plate movement is one of the major forces that changes the location and shape of continents and oceans—major changes that we can't detect and that appear gradually over millions of years.

Some earth-changing events occur naturally, but others come from us, from humans. It's important to remember that we have our own impact on the earth. In many cases, humans influence the earth's natural processes on purpose, speeding them up, slowing them down, or manipulating them in other ways to get

something we want—usually a natural resource, like water or oil. Some of what we do to our planet is on purpose, and some of it is accidental.

Cutting down forests, building new houses, bridges, office buildings and movie theaters, can lead to quickening natural events that might have taken much longer without humans' involvement.

You can walk outside any time you like and see the planet stir: wind moving particles of sand and rock, water dripping from one surface onto another, seasons changing each year. Everything you see on a walk around your neighborhood contributes to the earth's changing and maturing, just like everything we do every day contributes to what we'll be like as people 10 years, 20 years, even 50 years from now. And those changes in our bodies and personalities—unless something unusual happens—take time to show up too.

It's interesting to think about how what we do and the forces that act on us affect who we become. The earth is a big, changing organism, just like we are.

Comprehension Questions

1. How much has the earth changed in its history?

- A. a lot*
- B. a little*
- C. not at all*
- D. not enough for anyone to notice*

2. Two effects mentioned in this passage are earthquakes and volcanic eruptions.

What is their cause?

- A. wind that blows sand from one place to another*
- B. water dripping from one surface onto another*
- C. the construction of houses, movie theaters, and bridges*
- D. the movement of the earth's outermost layer*

3. *Some of earth's changes take place too slowly for people to notice them happening.*

What evidence from the passage supports this statement?

- A. *Changes like earthquakes and volcanic eruptions are not everyday events, but they are easy to spot when they are happening.*
- B. *People notice changes glaciers have made to the size and shape of earth's oceans after the changes have taken place.*
- C. *Earth's history goes back billions of years, and a lot of changes, both fast and slow, have taken place over that period of time.*
- D. *People sometimes influence earth's natural processes on purpose by speeding them up, slowing them down, or manipulating them in other ways.*

4. *What is an example of change on earth that people can see happening?*

- A. *glaciers changing the size and shape of earth's oceans*
- B. *sand blowing from one part of a beach to another*
- C. *tectonic plate movement changing the location and shape of earth's continents*
- D. *tectonic plate movement changing the location and shape of earth's oceans*

5. *What is this passage mainly about?*

- A. *glaciers and erosion*
- B. *landslides and earthquakes*
- C. *changes in the earth*
- D. *changes in the human body*

6. Read the following sentences: “Water, wind and ice slowly shape the **surface** of the earth, constantly moving all around us. Activity just beneath the **surface** of the earth’s crust creates rapid changes in the shape of the land—that’s where we get volcanoes, landslides and earthquakes.”

What does the word “**surface**” mean in the sentences above?

- A. *a process that changes the shape of the earth*
- B. *an effect that takes many years for people to notice*
- C. *the middle or central part of something*
- D. *the outer layer or part of something*

7. Choose the answer that best completes the sentence below.

The earth is shaped by the movement of different forces, _____ water, wind, and ice.

- A. *never*
- B. *instead*
- C. *finally*
- D. *including*

8. How do humans influence the earth’s natural processes?

9. How are changes in the earth similar to changes in human beings?

10. The passage describes some ways that changes in the earth and changes in people are similar. What are some ways that changes in the earth and changes in people are different? Support your answer with evidence from the passage.

As Time Flies By

Numerous films and science-fiction novels have used time travel to send their characters to the past and the future. The technology to make time travel possible, of course, does not exist. But even if the technology needed to travel through the ages did exist, how would it actually work?

That question may not have a simple answer at the moment, but it does raise a lot of interesting points regarding what it means to “travel through time.” For a regular student, one piece of this challenge that is easier to think about is not time at all—it’s space.

In 2009, a blogger and scientist who goes by the username “Shechner” wrote a detailed examination of time travel in the film *Back to the Future*. The hero of that story, Marty McFly, travels from the year 1985 to 1955 by driving a car that has a time travel device built into it.

During an experiment at the Twin Pines Mall in Hill Valley, California, Marty videotapes the car as it accelerates to 88 miles per hour. Then it disappears in a burst of smoke and flames. One minute later, the car reappears precisely where it disappeared. It has traveled exactly one minute into the future.

The interesting thing that Shechner questioned when dissecting this moment is not whether it’s possible for an automobile to travel one minute into the future or 30 years into the past. His question is about where the vehicle will end up: if you do travel through time, how can you be sure you’ll end up in the exact same place that you left?

Minutes in Motion

Astronomers have spent centuries charting the stars and tracking the movements of planets across space and time. Hundreds of years of research and observations have given our civilization the very idea of time, in the form of days and years.

A single day on Earth can be broken into daytime and nighttime. The passing of day and night is caused by the rotation of the planet. Every 24 hours, the earth makes one complete rotation on its axis. During this rotation, the parts of the earth that face toward the sun are in daytime. The parts of the earth facing away from the sun are in nighttime.

Just as the earth is rotating on its axis, it's also traveling through space. Our planet, along with all the other planets in our solar system, makes an orbit around the sun. The amount of time it takes for the earth to make one complete orbit is about 365 days. The way we measure years is based on how long it takes our planet to make it all the way around the sun.

While it's common to think that time is continuously moving forward, it's also possible to think time is the result of Earth's planetary motions. In this way, time is about tracking the position of the earth in space.

Back to the Future or Flung Into Space?

Drawing on this knowledge about space and time, consider the case of Marty McFly.

In the film *Back to the Future*, Marty watches the time machine travel one minute into the future and appear in the exact same spot. Taking into account the movements of the earth, this seems impossible. If the planet is always rotating on its axis and at the same time always circling the sun, then the Twin Pines Mall parking lot wouldn't be in the same place it was just one minute earlier.

Just how far does the earth move in a single minute? According to Shechner's calculations, it moves precisely 1,123.17 miles. This number measures the speed of Earth's orbit around the sun as well as the speed of Earth's rotation on its axis. It may not seem like it, but every human being on Earth travels over 1,000 miles per minute through space, just by being on the planet. The only thing that stops us from flying off into the atmosphere is gravity.

If a time-traveling car cruises one minute into the future, then it could reappear a thousand miles away on another place on the earth's surface, a thousand miles away from the earth in space, or a thousand miles deep into the earth's crust. It's very unlikely, however, that the car would be fast enough to catch up with the movements of the planet to end up in the exact place where it disappeared.

This puzzle isn't enough to ruin *Back to the Future*, which is considered by some to be a classic of blockbuster films. And if time travel technology is invented someday, the scientists may rely on a theory of time that doesn't depend on our current understanding of space.

In the meantime, though, all of us on planet Earth will keep moving with Earth, experiencing the passing minutes and changing seasons.

Comprehension Questions

1. According to the passage, time travel is closely related to which of the following?

- A. cars
- B. space
- C. stars
- D. computers

2. When the author describes the earth's movements around the sun, what does he focus on?

- A. the way it affects how we measure time
- B. which forces cause the earth to move
- C. how Marty McFly could travel faster than the earth
- D. why it takes a year to rotate around the sun

3. Films and novels use time travel to send characters to the past and future.

Which evidence in the passage best supports this conclusion?

- A. *The Twin Pines Mall is a fictional location.*
- B. *Astronomers have spent centuries charting the stars and tracking the movements of planets across space and time.*
- C. *Marty McFly travels from 1985 to 1955 in Back to the Future.*
- D. *Back to the Future is considered by some to be a classic of blockbuster films.*

4. *If the earth never stops moving, what can you infer about time?*

- A. *It stops and starts.*
- B. *It goes both forward and backward.*
- C. *It moves faster on the Sun.*
- D. *It never stops moving forward.*

5. *What is the passage mainly about?*

- A. *a real time travel experiment at the Twin Pines Mall*
- B. *how and why humans measure time*
- C. *what Marty McFly does when he arrives in the future*
- D. *how time travel may relate to movement through space*

6. *Read the following sentence: "If a time-traveling car **cruises** one minute into the future, then it could reappear a thousand miles away on another place on the earth's surface, a thousand miles away from the earth in space, or a thousand miles deep into the earth's crust."*

As used in the passage, what does the word "**cruises**" more nearly mean?

- A. *travels*
- B. *stops*
- C. *explodes*
- D. *turns*

7. Choose the answer that best completes the sentence below.

_____ the author is focused on traveling through time, much of the article is about traveling through space.

- A. Obviously
- B. So
- C. But
- D. Even though

8. When Marty McFly's car travels a minute into the future, how far does it move in space?

9. What does Schechner's theory of time travel conclude about a time traveling car that cruises one minute into the future?

10. Explain whether the people who made *Back to the Future* would agree with Shechner's theory of time travel. Use information from the passage to support your

Puppet Power!

When most people think about puppets, images from childhood come to mind: Kermit the Frog and Elmo from *Sesame Street*, perhaps. Today, however, puppets seem to be getting out of hand, popping up in TV commercials, and on Broadway and on the Japanese stage.

In New York City, puppets are singing opera. They are reciting Shakespeare. The stage production of *The Lion King* uses life-size elephant, giraffe, and hyena puppets. The Broadway show *Little Shop of Horrors* featured a life-size singing Venus's flytrap puppet. In Japan, bunraku, a serious form of puppet theater, is very popular.

Puppets come in all shapes, sizes, and materials. They can be simple cardboard cutouts or elaborate foam-rubber forms. They can be porcelain marionettes, puppets that dangle from strings. Simple puppets can be operated by a single finger. Other puppets require a highly skilled team of three or four people to work them. Puppets have been around for centuries.

"Sometimes we want things that hark back to a more innocent time," said one puppeteer.

Explicit Information Questions

1. *Puppets can be found*

- A. *in New York.*
- B. *in Japan.*
- C. *on Sesame Street.*
- D. *all of the above.*

2. *What does it mean when the author says that puppets "pop up in TV commercials, on Broadway, and on the Japanese stage."?*

- A. *There are new pop-up style puppets.*

B. Puppets appear in many different places.

C. Puppets are being used to sell popcorn.

D. Puppeteers now use puppets by having them pop up and down.

3. Puppets may be operated by a single finger, a marionetteer, or

A. a highly skilled team of three or four people.

B. mechanical engineers.

C. electricians.

D. farmers.

4. Puppets have been around for

A. millions of years.

B. ten years.

C. a few years.

D. centuries.

5. What is the main idea of this passage? Explain.

That Tickles!

Have you ever tried tickling yourself? If you're like most people, it doesn't work. Scientists say there's a good reason why. They recently conducted tickling experiments and discovered that it has to do with your brain.

The **cerebellum** is an area of your brain that controls your body's balance and coordination. When you tickle yourself, the cerebellum tells other parts of your brain to ignore the feeling.

Scientists now think that your brain is protecting your body by not responding to tickles you give yourself. A self-tickle is silly business. A tickle coming from somewhere else might be serious. It could be a spider crawling on your skin or another real danger. In cases like that, the cerebellum warns your body that it needs to pay attention. That's no laughing matter!

Cause & Effect Questions

1. Tickling yourself usually doesn't work, because

- A. scientists conducted experiments about it*
- B. you get scared of your own tickles.*
- C. you cannot laugh if you are not surprised.*
- D. the brain directs your body to ignore the feeling.*

2. Tickling is important, scientists think, because

- A. it makes you feel happy.*
- B. the sensation of being tickled could alert you to danger.*
- C. all humans like to be tickled.*
- D. they have studied it and they know.*

3. *The statement “a self-tickle is silly business” means that*

- A. self-tickling belongs in a comic show.*
- B. it is impossible to warn yourself of danger by self-tickling.*
- C. self-tickling is entertaining instead of alarming.*
- D. self-tickling protects your body against danger.*

4. *The cerebellum is the part of the brain that controls*

- A. balance.*
- B. coordination.*
- C. how the body reacts to sensations.*
- D. all of the above.*

5. *What is the main idea of the article? Explain.*