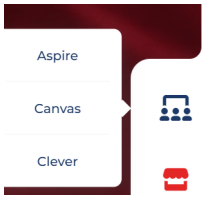
Dear Parents,

Here is the work for our Virtual Learning Day. Please help your student complete assignments.

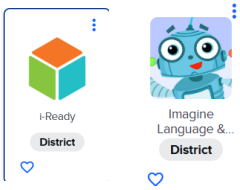
Instructions for Logging in to Canvas



1. Go to hawthornacademy.org
2. Hover over the Clever icon (it looks like this:
3. Click Clever
4. Select “Login with Google”
5. Click

6. Enter your student’s username:
   firstname.lastname (no spaces) followed by @hawthornstudent.org
   Example: *emily.smith@hawthornstudent.org*
   Password: hawthorn lunch number (no spaces)
   Example :hawthorn1234

Accessing iready and imagine learning



1. Once logged in, locate and click the iready icon.
2. This will take them to their lessons they need to work for 15 minutes
3. Once they finish that they will click on the Imagine Learning icon.
4. They will work on this for 20 minutes.

Assignments for the day

1. The assignments are attached, scroll down to see the assignments for today.
2. You can either print the assignments or students can write their answers on a separate piece of paper and turn that in to their teacher when we return to school. Or you can email a picture to the teacher.

Thank you for your support in helping your student succeed on our virtual learning day!

Adding 4-digit numbers in columns

Grade 4 Addition Worksheet

Find the sum.

1. 7,340 + 9,473 = _____

2. 3,026 + 2,689 = _____

3. 125 + 867 = _____

4. 6,804 + 651 = _____

5. 6,774 + 7,826 = _____

6. 1,762 + 3,722 = _____

7. 9,778 + 1,226 = _____

8. 4,400 + 4,474 = _____

9. 7,942 + 9,798 = _____

10. 7,559 + 8,529 = _____

11. 7,274 + 4,558 = _____

12. 8,704 + 222 = _____

13. 5,536 + 5,619 = _____

14. 290 + 4,342 = _____

15. 8,519 + 9,033 = _____

16. 491 + 1,091 = _____

Subtracting 4-digit numbers, with regrouping

Grade 4 Subtraction Worksheet

Find the difference.

1. 4,387 - 3,359 = _____

2. 8,385 - 1,851 = _____

3. 6,247 - 3,694 = _____

4. 8,173 - 2,950 = _____

5. 4,184 - 1,936 = _____

6. 2,367 - 1,308 = _____

7. 9,532 - 8,278 = _____

8. 5,803 - 3,290 = _____

9. 550 - 450 = _____

10. 8,073 - 7,000 = _____

11. 4,792 - 2,226 = _____

12. 4,871 - 2,890 = _____

ALL ABOUT WAVES

Listen carefully. Can you hear anything right now? Even if you can hear a tiny sound, that means that there are sound waves around you. All kinds of waves are all around us. You can't see most waves. However, they play an important role in life.

What Are Waves?

Waves are the way that matter transfers energy. When energy moves from one place to another, it moves in waves. Sometimes you can see them. Sometimes you can't.

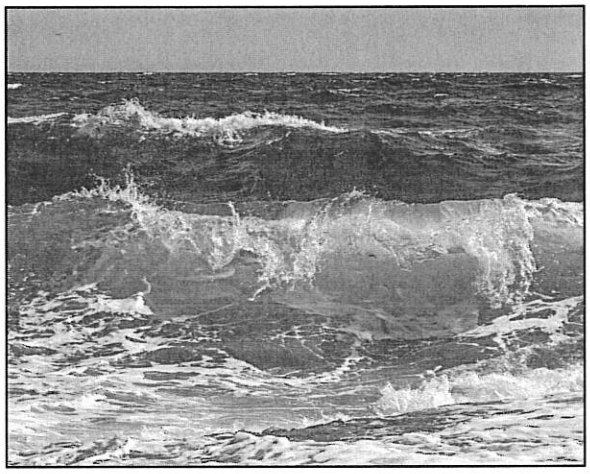
Some examples of waves are waves in water, sound waves, light waves, and even microwaves like the ones used in microwave ovens.

Types of Waves

There are two main types of waves: mechanical and electromagnetic. They are different in one major way. Mechanical waves require a medium in which to move. Some examples of mediums are water and air. This type of wave needs molecules to move through. The molecules bump against each other which helps the wave move.

Electromagnetic waves don't need a medium. That means that they can move even in space, where there is no air. They travel through special electric and magnetic fields. Charged particles generate these fields. Some of these waves are light, microwaves, and radio waves.

Other important types of waves are transverse and longitudinal waves. Transverse waves are like the waves you see in water. They move up and down and left to right or right to left. Electromagnetic waves are transverse waves.



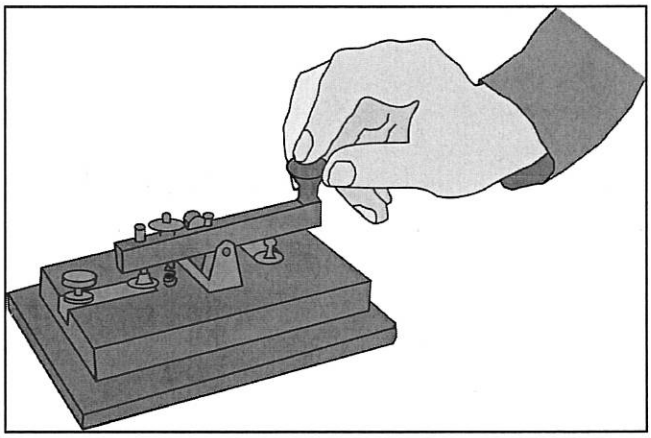
How can you describe the waves shown above? Can they be described in more than one way?

Longitudinal waves are different. They act more like a coil spring. Imagine the spring is laying on the floor. If you pinch together and let go of one end of the spring, the energy will move through the spring in a wave. Another way to describe these waves is that they push. They push, compress, and then spread again, moving in a direct line. Sound waves are longitudinal waves.

Parts of a Wave

When you imagine a picture of a transverse wave, it looks like a rope moving up and down. To talk about this kind of a wave, scientists use special words. Two important words are the amplitude and wavelength.

Imagine a line that goes right through the middle of the wave. This is the resting point. The distance between the resting point and the high points above (the crest) or the low points below (the trough) is the amplitude. The energy of the wave is bigger when the amplitude is bigger. The distance between high points is the wavelength. The wavelength tells you the frequency, or how much energy the wave has.



The device pictured above was used to create messages using Morse Code. Morse Code can be transmitted via electric current, radio waves, visible light, or sound waves. The waves are present when the dash or dot is sent, and then the wave is absent during the pauses between the dots and dashes.

Waves Move Objects

Sometimes, waves can cause objects to move. Waves themselves are energy. However, that energy sometimes moves things like water. This happens when lake or ocean waves move boats and move water that hits beaches.

Another example of waves moving items is sound waves. When you hear really loud music, have you ever felt vibrations? Sometimes a loud bass can cause objects around them to move just a tiny bit. For example, a pencil might move a little bit if it's sitting on a table where a bass speaker is also sitting.

Waves and Patterns

Waves are very useful for making sound, light, and even heating up food. We can also use waves in patterns to communicate. One example of this type of pattern is Morse code. Morse code is a special code that uses sounds or flashes of light that represent letters. The code is a mix of dots and dashes.

The dots are short beeps or flashes. The dashes are longer beeps or flashes. For example, the letter "a" is one dot and one dash. However, the letter "h" is four dots. Then, people listen or watch the code and turn it into letters. Morse code was used with telegraphs for many years. It was also used during WWII to help armies communicate with each other from far away.

Other patterns also help us communicate. For example, computers use patterns of 0s and 1s. Also, music is stored in a pattern of 0s and 1s. Computers, phones, and other digital devices can read the pattern very quickly. They know how to turn the pattern into an image, sound, or an action.

VOCABULARY BUILDER

Find the words below in the text. Copy the sentence the word is used in. Then, make an inference about what the word means using context clues. Finally, look up the actual definition using a dictionary. Try drawing a simple sketch to help you remember the meaning of the word.

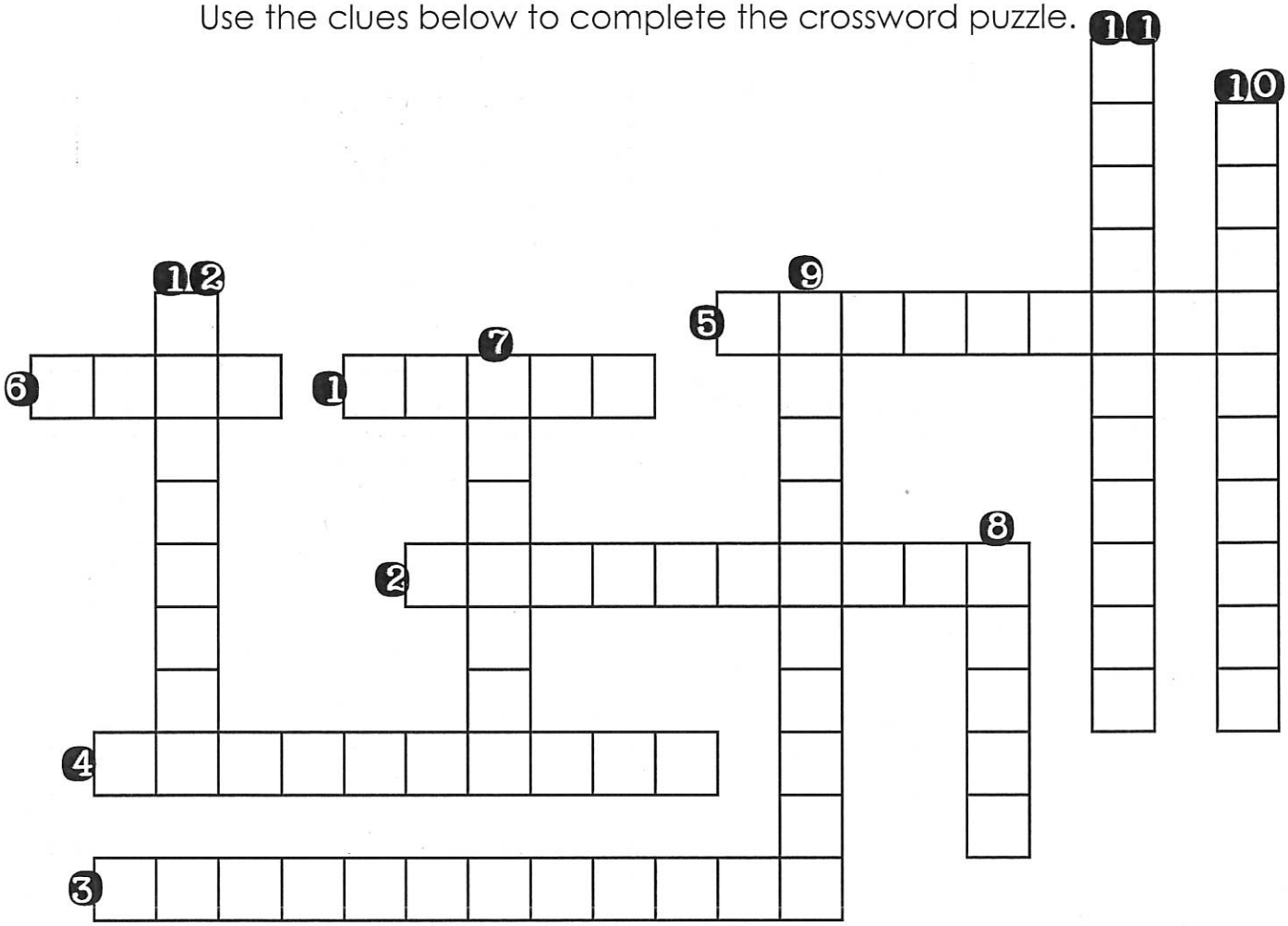
Word	Sentence from Text	Inferred Meaning	Actual Definition & Sketch
mechanical waves			
electromagnetic waves			
mediums			

VOCABULARY BUILDER CONTINUED...

Word	Sentence from Text	Inferred Meaning	Actual Definition & Sketch
transverse waves			
longitudinal waves			
amplitude			
wavelength			

VOCABULARY CROSSWORD PUZZLE

Use the clues below to complete the crossword puzzle.



Across:

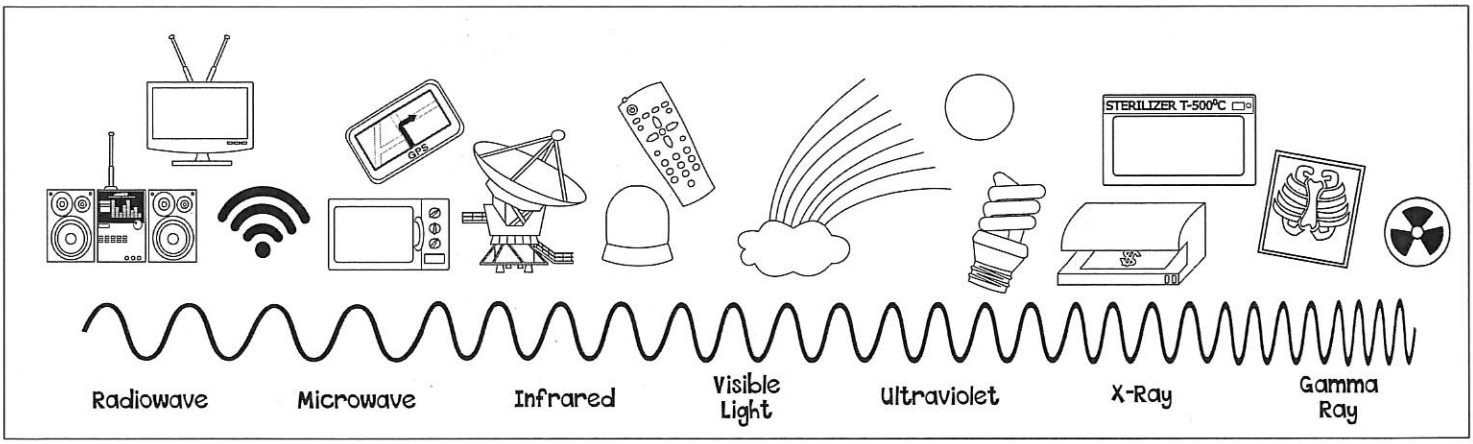
1. Matter transfers energy through _____.
2. _____ are used in a common household appliance.
3. Waves that act like a coil spring are _____ waves.
4. Waves that move up and down and left to right or right to left are _____ waves.
5. The energy of a wave is bigger when the _____ is bigger.
6. Waves are useful for preparing _____.

Down:

7. Some waves are _____.
8. When you listen to music, you can hear _____ waves.
9. _____ waves require a medium in which to move.
10. The distance between a wave's highpoints is the _____.
11. Waves can be used to _____. For example, messages can be sent via Morse Code.
12. A _____ can turn patterns of 0s and 1s into an image, sound, or an action.

WAVELENGTH AND AMPLITUDE

The diagram below shows various objects that use electromagnetic waves. The objects on the far left use the weakest waves. As the chart moves to the right, the waves become stronger and stronger.



1. What do you notice about the wavelengths shown in this diagram? What does the wavelength tell you about the different objects pictured?

2. Locate the objects below on the diagram above. Then, draw a wave with a longer wavelength and another wave with a shorter wavelength.

Object	Longer Wavelength	Shorter Wavelength