

SIXTH GRADE SCIENCE

SPACE SCIENCE

8 WORKSHEETS

MATCHING TYPE/ UNSCRAMBLE THE LETTERS/ FILL IN THE BLANKS

CONSTELLATIONS

COPERNICUS

GALAXIES

THE LIFE CYCLE OF STARS

TELESCOPE

MILKY WAY GALAXY

CONSTELLATIONS

Unscramble the words to reveal the correct answer.

1. a group of stars that appears to form a pattern or picture

OSCELATONILTN _____

2. an imaginary hollow globe that encloses the Earth; it offers a simple way to think about the stars that is helpful for navigation. (two words)

ECELLAISTEHREPS_____

3. constellation that looks like two fish tied together by the tail

SISECP_____

4. constellation that looks like a large bear (two words)

UASRAJORM_____

5. constellation that looks like a mighty hunter; lies on the celestial equator.

RIONO _____

6. constellation that looks like a dog (two words)

ANCISMJAOR_____

- 7 . constellations were regarded as semi-divine spirits which strode across the heavens. They are usually associated with Greek

MTOLGYOHY_____

8. the stars in the constellation are all part of this galaxy (two words)

KLYAYWIM_____

CONSTELLATIONS

Write the letter of the correct answer on the blanks.

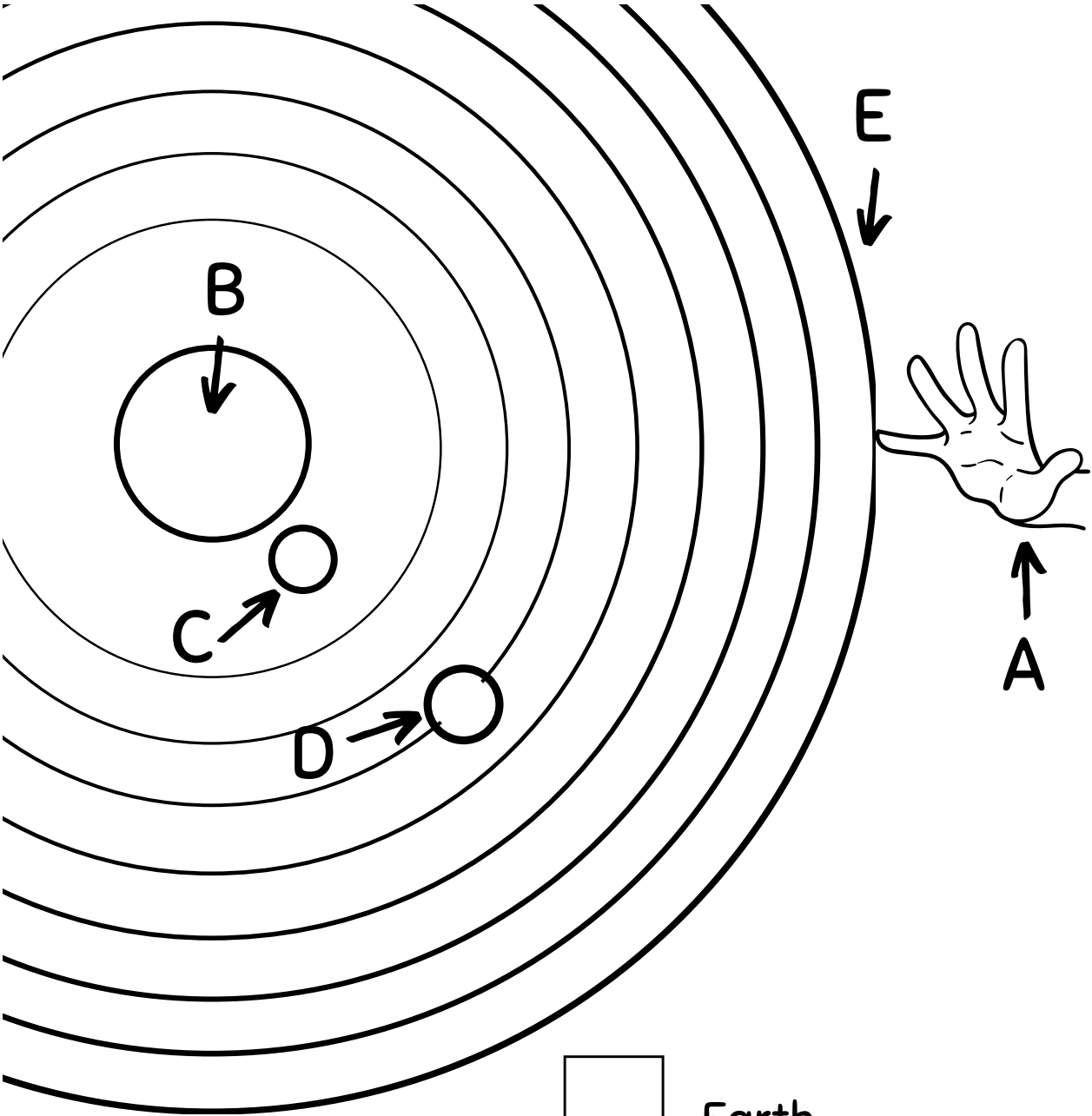
1. The earth's _____ keeps constellations on the move.
 2. The pattern of a constellation of stars is dependent on our _____ from earth.
 3. A _____ is a pattern of stars that forms a picture that refers to a specific area on a map
 4. _____ is a large celestial body close to the constellation Orion and is visible to the naked eye.
 5. The _____ is the narrow band of sky that the sun travels across each day.
 6. The number of constellations in the _____ is equivalent to the number of months in a year.
 7. _____ is also known as the North Star
 8. _____ constellations are located above the earth's poles and are visible all year round
- A. perspective
B. rotation
C. circumpolar
D. Polaris
E. zodiac
F. ecliptic
G. Orion Nebula
H. constellation

COPERNICUS

Write the letter of the correct answer on the blanks.

- | | |
|--|--------------------|
| 1. _____ theorized that the planets were not directly attached to celestial spheres but rotated around them in perfect circles | A. geocentric |
| 2. _____ means the earth stands motionless in the center of the universe | B. Aristotle |
| 3. Aristotle theorized that this triggers the motion of the sun, moon and planets | C. Prime Mover |
| 4. the astronomical model in which the Earth and planets revolve around the Sun at the center of the universe. | D. Ptolemy |
| 5. The astronomer who proposed that the sun was stationary in the center of the universe | E. Newton |
| 6. observed moons orbiting Jupiter | F. Galileo Galilei |
| 7. theorized that planets move in ellipses not in circles | G. Copernicus |
| 8. showed that the force of gravity was sufficient to move the stars and the planets | H. Kepler |
| 9. small circular orbits that follow around much larger orbits around the Earth. | I. heliocentric |
| 10. theorized that each object in the sky was attached to one of celestial spheres, or transparent shells | J. epicycles |

Identify the location of each item in a geocentric model of the universe. Write the letter on the correct box.

☐

Moon

☐

Sun

☐

Earth

☐

Prime Mover

☐

Celestial sphere

GALAXIES

Unscramble the words to reveal the correct answer.

1. the wavelength of light from objects that are moving away from the earth appears to get longer. This is called

ERSDFTIH _____

2. the energy from this event caused galaxies to move away from one another (two words) GIBBNGA_____

3. when a massive star reaches the end of its life and implodes, collapsing in on itself, this is the result (two words)

BACHOELKL _____

4 an unknown substance thought to account for a large amount of the universe's mass. (two words)

ADRMERTAK_____

5. this force prevents galaxies from falling apart and from crashing into each other .

RGAIVTY _____

6. These are clusters of stars , dust, gas and other space objects that are held together by gravity.

AGLXIESA_____

7 . category of galaxy that are shaped like discs, containing middle aged stars and a moderate amount of gas and dust:

PISRAL_____

8. this tells where a galaxy is moving ; as an object moves towards or away from something, the wavelength they emit appears to change: (two words)

DOPLSHFTIERP_____

9. category of galaxy that can be shaped from round to flat and spheres, that contain old stars and very little gas or dust:

ALEIPCTILL_____

10. when an object is moving towards the earth, the wavelength of light they emit appears to get shorter or closer to the blue end of the visible spectrum . This is called LEHIFTSUB_____

THE LIFE CYCLE OF STARS

Write the letter of the correct answer on the blanks.

- | | |
|--|---------------------|
| 1. neutron stars that spin rapidly, emitting pulses of radio waves | A. stellar nursery |
| 2. the collapsed cores of massive stars. | B. protostar |
| 3. powerful and luminous explosion of a star after it collapses . | C. nuclear fusion |
| 4. stars at then end stage of their lives when a star sheds its outer layers. | D. main sequence |
| 5. When the sun uses up all the hydrogen in its core, it will expand and then cool down into as it begins to burn helium. This is called | E. white dwarfs |
| 6. mid-sized stars turn into these super-dense objects after its main sequence | F. red giant |
| 7. the star's lifetime | G. planetary nebula |
| 8. this generates an enormous amount of energy, causing the star to ignite | H. supernova |
| 9. a very young star that is still gathering mass from its parent molecular cloud. | I. neutron star |
| 10. a molecular cloud in the process of forming new stars. | J. pulsar |

TELESCOPE

Write the letter of the correct answer on the blanks.

- | | |
|---|----------------------|
| 1. general set of devices that captures and magnifies ight | A. refractor |
| 2. uses glass lenses to gather light | telescope |
| 3.uses a series of curved mirrors to gather light | B. magnification |
| 4. the telescope's ability to enlarge an image | C. reflector |
| 5. diameter of the lens or mirror that gathers light | telescope |
| 6. magnifies visible light | D. telescope |
| 7. uses radio waves , used to study stars and other distant objects, magnify images that can't be seen by the naked eye | E. aperture |
| | F.optical telescopes |
| | G. radio telescopes |
| 8. this telescope is located in space so that images are not distorted by the Earth's atmosphere | H. Hubble telescope |

THE MILKY WAY GALAXY

Fill in the blanks.

The 1) _____ is made up of planets, gas , dust and dark matter. From earth, the galaxy looks hazy and white in the night sky, like milk. But from a closer view , the Milky way really looks like a spiral with a band across in the middle. This pattern of galaxy is called the 2) _____. Its center contains a bulge of stars, major arms, and several minor ones. It has a spiral around the bulge and an area known as the 3) _____. Outside the disk is a spherical halo of old stars.

Black holes are a result of a collapsed star . It has a gravity that is so strong that not even light can escape it. Most scientists however, believe that at the center of the galaxy, there exists a bigger black hole that was the result of the collapse of not just one, but many stars. They call it a 4)_____.

The earth is located in a minor arm of the disk called the 5) _____. Our solar system orbits around the galactic center once every 225 to 250 million years. The 6) _____, also known as a cosmic year, is the duration of time required for the Sun to orbit once around the center of the Milky Way Galaxy.

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SPACE SCIENCE

ANSWER KEY

8 WORKSHEETS

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COPERNICUS

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MILKY WAY GALAXY

CONSTELLATIONS

Unscramble the words to reveal the correct answer.

1. a group of stars that appears to form a pattern or picture

OSCELATONILTN _____ CONSTELLATION

2. an imaginary hollow globe that encloses the Earth; it offers a simple way to think about the stars that is helpful for navigation. (two words)

ECELLAISTEHREPS _____ CELESTIAL SPHERE

3. constellation that looks like two fish tied together by the tail

SISECP _____ PISCES

4. constellation that looks like a large bear (two words)

UASRAJORM _____ URSA MAJOR

5. constellation that looks like a mighty hunter; lies on the celestial equator.

RIONO _____ ORION

6. constellation that looks like a dog (two words)

ANCISMJAOR _____ CANIS MAJOR

7. constellations were regarded as semi-divine spirits which strode across the heavens. They are usually associated with Greek

MTOLGYOHY _____ MYTHOLOGY

8. the stars in the constellation are all part of this galaxy (two words)

KLYAYWIM _____ MILKY WAY

CONSTELLATIONS

Write the letter of the correct answer on the blanks.

1. The earth's _____ keeps constellations on the move. **B**
 2. The pattern of a constellation of stars is dependent on our _____ from earth. **A**
 3. A _____ is a pattern of stars that forms a picture that refers to a specific area on a map **H**
 4. _____ is a large celestial body close to the constellation Orion and is visible to the naked eye. **G**
 5. The _____ is the narrow band of sky that the sun travels across each day. **F**
 6. The number of constellations in the _____ is equivalent to the number of months in a year. **E**
 7. _____ is also known as the North Star **D**
 8. _____ constellations are located above the earth's poles and are visible all year round **C**
- A. perspective
B. rotation
C. circumpolar
D. Polaris
E. zodiac
F. ecliptic
G. Orion Nebula
H. constellation

COPERNICUS

Write the letter of the correct answer on the blanks.

1. _____ theorized that the planets were not directly attached to celestial spheres but rotated around them in perfect circles **D**

2. _____ means the earth stands motionless in the center of the universe **A**

3. Aristotle theorized that this triggers the motion of the sun, moon and planets **C**

4. the astronomical model in which the Earth and planets revolve around the Sun at the center of the universe. **I**

5. The astronomer who proposed that the sun was stationary in the center of the universe **G**

6. _____ observed moons orbiting Jupiter **F**

7. theorized that planets move in ellipses not in circles **H**

8. showed that the force of gravity was sufficient to move the stars and the planets **E**

9. _____ small circular orbits that follow around much larger orbits around the Earth. **J**

10. theorized that each object in the sky was attached to one of celestial spheres, or transparent shells **B**

A. geocentric

B. Aristotle

C. Prime Mover

D. Ptolemy

E. Newton

F. Galileo Galilei

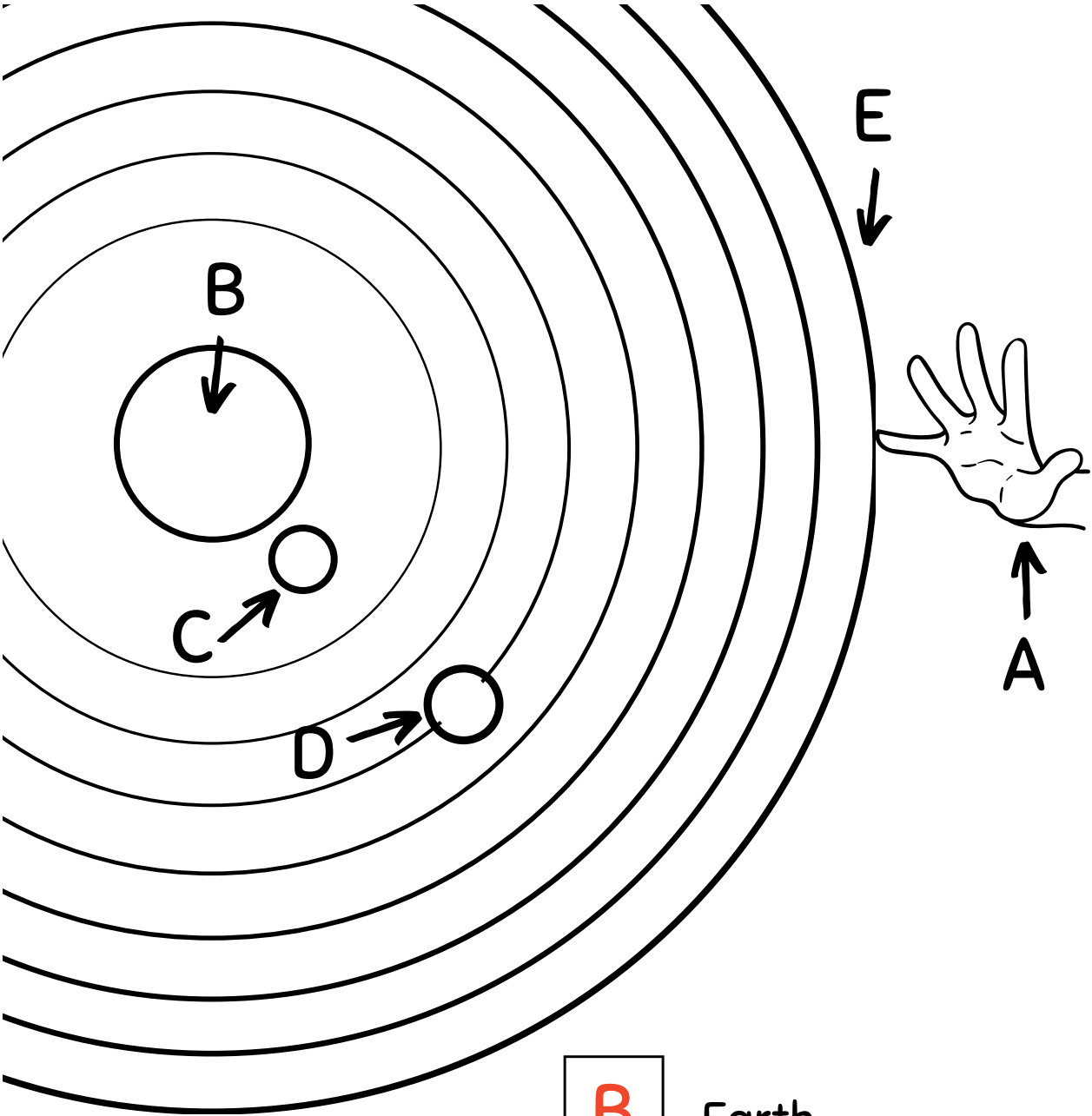
G. Copernicus

H. Kepler

I. heliocentric

J. epicycles

Identify the location of each item in a geocentric model of the universe. Write the letter on the correct box.



C Moon

D Sun

B Earth

A Prime Mover

E Celestial sphere

GALAXIES

Unscramble the words to reveal the correct answer.

1. the wavelength of light from objects that are moving away from the earth appears to get longer. This is called

ERSDFTIH _____ REDSHIFT

2. the energy from this event caused galaxies to move away from one another (two words) GIBBNGA_____ BIG BANG

3. when a massive star reaches the end of its life and implodes, collapsing in on itself, this is the result (two words)

BACHOELKL _____ BLACK HOLE

4 an unknown substance thought to account for a large amount of the universe's mass. (two words)

ADRMERTAK_____ DARK MATTER

5. this force prevents galaxies from falling apart and from crashing into each other .

RGAIVTY _____ GRAVITY

6. These are clusters of stars , dust, gas and other space objects that are held together by gravity.

AGLXIESA_____ GALAXIES

7 . category of galaxy that are shaped like discs, containing middle aged stars and a moderate amount of gas and dust:

PISRAL_____ SPIRAL

8. this tells where a galaxy is moving ; as an object moves towards or away from something, the wavelength they emit appears to change: (two words)

DOPLSHFTIERP_____ DOPPLER SHIFT

9. category of galaxy that can be shaped from round to flat and spheres, that contain old stars and very little gas or dust:

ALEIPCTILL_____ ELLIPTICAL

10. when an object is moving towards the earth, the wavelength of light they emit appears to get shorter or closer to the blue end of the visible spectrum . This is called LEHIFTSUB_____ BLUESHIFT

THE LIFE CYCLE OF STARS

Write the letter of the correct answer on the blanks.

1. neutron stars that spin rapidly, emitting pulses of radio waves **J**

2. the collapsed cores of massive stars. **I**

3. powerful and luminous explosion of a star after it collapses. **H**

4. stars at the end stage of their lives when a star sheds its outer layers. **G**

5. When the sun uses up all the hydrogen in its core, it will expand and then cool down into as it begins to burn helium. This is called **F**

6. mid-sized stars turn into these super-dense objects after its main sequence **E**

7. the star's lifetime **D**

8. this generates an enormous amount of energy, causing the star to ignite **C**

9. a very young star that is still gathering mass from its parent molecular cloud. **B**

10. a molecular cloud in the process of forming new stars. **A**

A. stellar nursery

B. protostar

C. nuclear fusion

D. main sequence

E. white dwarfs

F. red giant

G. planetary nebula

H. supernova

I. neutron star

J. pulsar

TELESCOPE

Write the letter of the correct answer on the blanks.

- | | |
|---|---------------------------|
| 1. general set of devices that captures and magnifies ight
D | A. refractor
telescope |
| 2. uses glass lenses to gather light A | B. magnification |
| 3.uses a series of curved mirrors to gather light C | C. reflector
telescope |
| 4. the telescope's ability to enlarge an image B | D. telescope |
| 5. diameter of the lens or mirror that gathers light E | E. aperture |
| 6. magnifies visible light F | F.optical telescopes |
| 7. uses radio waves , used to study stars and other
distant objects, magnify images that can't be seen by the
naked eye G | G. radio telescopes |
| 8. this telescope is located in space so that images are
not distorted by the Earth's atmosphere H | H. Hubble telescope |

THE MILKY WAY GALAXY

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The earth is located in a minor arm of the disk called the 5) _____. Our solar system orbits around the galactic center once every 225 to 250 million years. The 6) _____, also known as a cosmic year, is the duration of time required for the Sun to orbit once around the center of the Milky Way Galaxy.

ANSWERS

1) Milky Way galaxy

2) barred spiral

3) disk

4) supermassive black hole

5) Orion arm

6) galactic year