

Select the correct answers.

Two T-shirts are left to dry out in the Sun. One is colored white and one colored black.
What do you expect will happen and why?



☐ The black T-shirt will dry slower.

☐ Black objects reflect all light waves.

☒ The black T-shirt will dry faster.



☐ The white T-shirt will dry faster.

☐ White objects absorb all light waves.

☒ Black objects absorb all light waves.



QUESTION 2



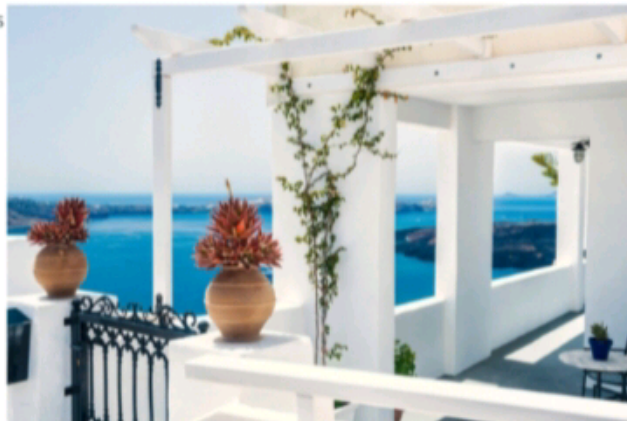
<https://moe.alefcd.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730a...> 1/61

9/29/22, 8:07 AM

Alel Frontend

Select the correct answer.

Why are most houses in hot climates painted with lighter-colored paint?



☐ Lighter-colored paints absorb heat.

☒ Lighter-colored paints reflect heat.



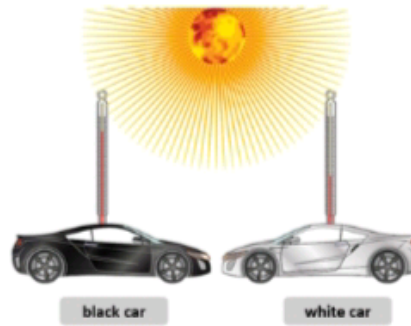
☐ Lighter-colored paints are less reactive.

☐ Lighter-colored paints are more reactive.

35 °C

, the temperature of the black car will most likely be

55 °C ✓



+ 30 °C

+ 35 °C

+ 10 °C

QUESTION 4



Car A

Car B



Start Temperature	31°C	31°C
End Temperature	?	45°C

Select the best choice from the drop-down menus.

Two cars are parked in the sun all day. Use the table to complete the sentences.

<https://moa.alel.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730a...> 3/61

The end temperature of Car A will most likely be

35 °C ✓

This is because white reflects light waves, therefore, Car A will feel cooler than Car B.

QUESTION 5



Drag and drop the correct option to complete the sentence.

Black-colored objects transfer



thermal energy ✓

faster than white-colored objects.

9/29/22, 8:07 AM

Alel Frontend

The T-shirt that would be most comfortable to wear on a hot summer's day would be:



This is because the Sun's rays and does not change temperature easily.

☐ black absorbs



☐ white absorbs



black reflects

9/29/22, 8:07 AM

Alel Frontend

QUESTION 7



Select the correct answer.

Object	A	B
Material	Metal	Metal
Time in the Sun	10 hours	10 hours
Start Temperature	31°C	31°C
End Temperature	45°C	35°C

Look carefully at the table.

Which of the following could be true about Objects A and B?

Object A	Reason
Black colored surface	Its temperature has increased the most.



Reflectivity ✓

is when light waves bounce off the surface of an object.

QUESTION 9



Select the correct answer.

Which color does **NOT** reflect light waves?☒  ✓☐ <https://moe.alefcd.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730a...> 7/61

9/29/22, 8:07 AM

Akel Frontend

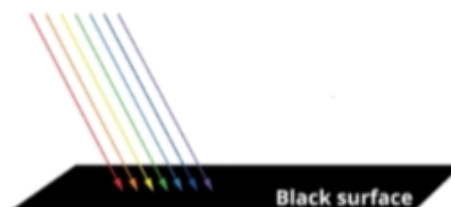
☐ ☐ 

QUESTION 10



Select the correct answer.

Which process is shown in this image?

☐ reflectivity☐ coloration☐ magnetism☒ absorption ✓<https://moe.alefcd.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730a...> 8/61

9/29/22, 8:07 AM

Alef Frontend

The T-shirt that would be most comfortable to wear on a hot summer's day would be:



This is because white reflects ✓ the Sun's rays and does not change temperature easily.

✚ black absorbs

✚ white absorbs

✚ black reflects

9/29/22, 8:07 AM

Alef Frontend

QUESTION 7



Select the correct answer.

Object	A	B
Material	Metal	Metal
Time in the Sun	10 hours	10 hours
Start Temperature	31°C	31°C
End Temperature	45°C	35°C

Look carefully at the table.

Which of the following could be true about Objects A and B?

Object A	Reason
Black colored surface	Its temperature has increased the most.



Select the best choice from the drop-down menu.

Reflectivity   is when light waves bounce off the surface of an object.

QUESTION 9



Select the correct answer.

Which color does **NOT** reflect light waves?

☒  

☐ 

<https://moe.alefed.com/teacher/71662608292210#/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730a...> 7/61

9/29/22, 8:07 AM

Aleef Fromend

☐ 

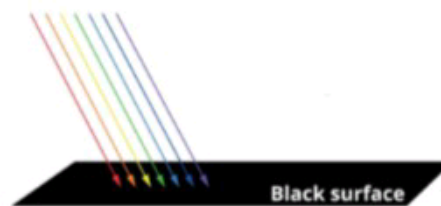
☐ 

QUESTION 10



Select the correct answer.

Which process is shown in this image?



☐ reflectivity

☐ coloration

☐ magnetism

☒ absorption 

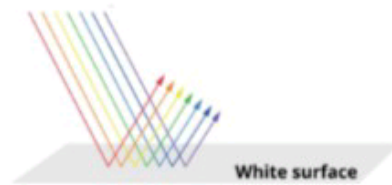
<https://moe.alefed.com/teacher/71662608292210#/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730a...> 8/61

QUESTION 11



Select the correct answer.

Which process is shown in this image?



☐ coloration

☐ magnetism

☐ absorption

☒ reflectivity 

QUESTION 12



Select the correct answer.

Which color surface reflects all light waves?

<https://moe.alefled.com/teacher/71662608292210w/lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/d/d936a0a-d175-4387-9272-730a...> 9/61

9/29/22, 8:07 AM

Alel Frontend

☐



☐



☒ 



☐



Select the correct answers.

Which T-shirt would feel the coolest and why?

Choose one color and one reason for your choice.

☐

All the light waves are absorbed.

<https://mo.e.alefled.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730a...> 10/61

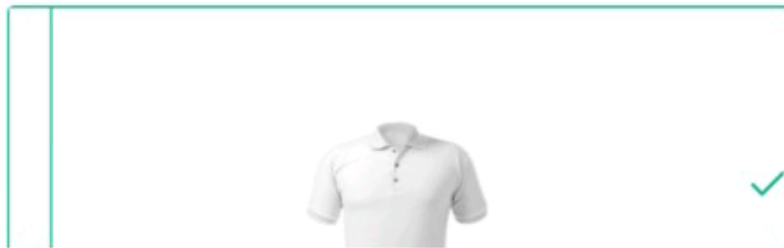
9/29/22, 8:07 AM

Alel Frontend

☐☐

Thermal energy transfer happens faster.

Thermal energy transfer happens slower.

☐

<https://mo.e.alefled.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730a...> 11/61

9/29/22, 8:07 AM

Alel Frontend



QUESTION 14



Select the best choice from the drop-down menus.

Black-colored objects transfer **thermal energy faster** than other colored

objects because black **absorbs** all light waves.



Select the correct answer.

The
starting

Car A



Car B



temperature of Car A and Car B is
 20°C

What are the likely temperatures of both Cars after 8 hours of being parked in the Sun?

<https://moe.aleltd.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 12/61

9/29/22, 8:07 AM

Alel Frontend

Car A	Car B
35°C	35°C

Car A	Car B
35°C	45°C

Car A	Car B
45°C	35°C

Car A	Car B
45°C	45°C

QUESTION 16



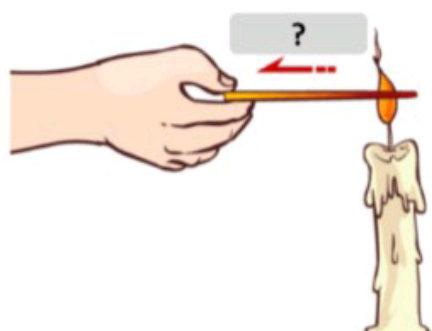
Select the best choice from the drop-down menu.

Thermal **conduction** is the transfer of thermal energy as heat moves from one object to another when the objects are touching.

<https://moe.aleltd.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 13/61

9/29/22, 8:07 AM

Alel Frontend



Drag and drop the correct option to complete the sentence.

During convection, cool air moves

below



warm air.



to the left of

to the right of

above

QUESTION 18



Select the correct answer.

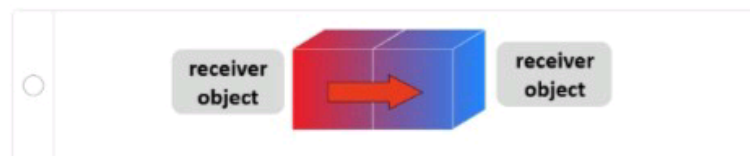
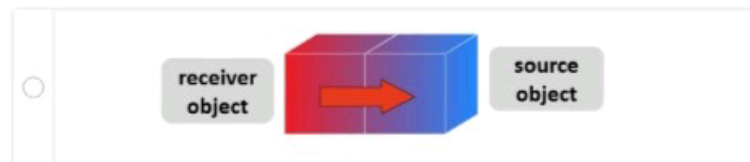
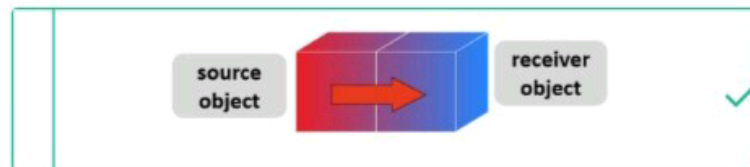
Heat is transferred between two objects.

<https://mo.e.alefled.com/teacher/71662608292210w/lessons/lesson0591d992-1c84-414f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 14/61

9/29/22, 8:07 AM

Alel Frontend

Which image correctly identifies the source and the receiver object?



QUESTION 19



Drag and drop the correct options to complete the sentence.

<https://mo.e.alefled.com/teacher/71662608292210w/lessons/lesson0591d992-1c84-414f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 15/61

9/29/22, 8:07 AM

Alel Frontend

Convection only happens in liquids and gases. Hot particles

rise



, and cold particles

sink

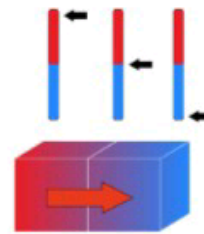


Drag and drop the correct option to complete the sentences.

Heat, is the transfer of thermal energy ✓

Heat always moves from the hotter object ✓ to the

colder object ✓



equilibrium

open system

<https://moe.alefcd.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 16/61

9/29/22, 8:07 AM

Alel Frontend

matter

QUESTION 21

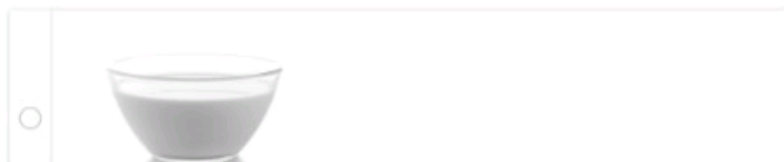
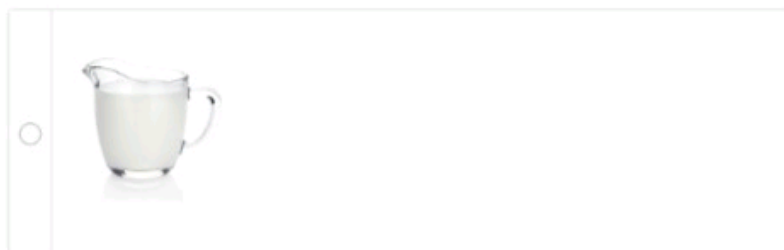


Select the correct answer.

Each container has 300 milliliters of hot milk at the same temperature.

Each container is made of the same type and thickness of glass.

Which container of milk will **most likely** take the longest time to transfer heat to its surroundings?



<https://moe.alefcd.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 17/61

9/29/22, 8:07 AM

Alel Frontend



Select the correct answer.

Each block has the same volume, the same surface area, and the same mass.

Which block would need the least amount of energy to change its temperature?

☐



wood

☐



ice

<https://moe.alefied.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 18/61

9/29/22, 8:07 AM

Alef Frontend

☒



steel

☐



concrete

QUESTION 23



Use the table to fill in the missing term.

This table shows the specific heat of different materials.

The material that would need the most energy to change its temperature is

polystyrene



Material	Specific Heat (J/g °C)
copper	0.39
air	1.01
wood	1.76

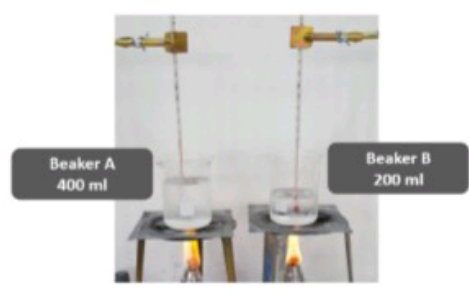
<https://moe.alefied.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 19/61

9/29/22, 8:07 AM

Alef Frontend

polystyrene	1.88
steel	0.466
platinum	0.133

Select the correct answers.
Why would Beaker A take longer than Beaker B to reach 100°C?



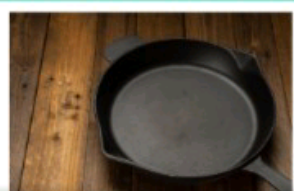
- ☒ Beaker A has a greater mass of water. ✓
- ☐ Beaker A has a larger surface area.
- ☒ Beaker A will need more heat energy to reach 100°C. ✓

- ☐ Beaker B will need more energy heat energy to reach 100°C.
- ☐ Beaker A will need less heat energy to reach 100°C.
- ☐ Beaker A has a lesser mass of water.

QUESTION 26

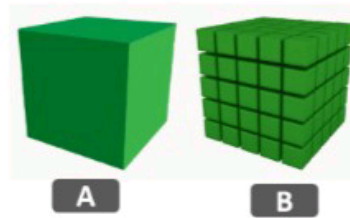
Select the correct answer choices.
Which of the following has a lower specific heat than plastic?

- ☒ 
copper wire ✓
- ☐ 
paper

- ☒ 
metal frying pan ✓

Select the correct answers.

Which statements about the surface area and heat transfer of A and B are **TRUE**



- ☐ Heat transfer will be slower through B than A.
- ☐ Heat transfer will happen at the same speed through A and B.
- ☐ B has a smaller surface area than A.
- ☒ Heat transfer will be faster through B than A.
- ☒ B has a larger surface area than A.
- ☐ A and B have the same surface area.

QUESTION 27

<https://moe.alelled.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 23461

9/29/22, 8:07 AM

Alel Frontend

Drag and drop the correct options to complete the sentence.

Energy transfer happens faster through thin objects and slower through thick objects.

receiver objects

source objects

closed systems

open systems

QUESTION 28

Drag and drop the statements to explain each factor's effect on thermal energy transfer.

Factor	Type of Matter	Mass of Matter	Shape of Matter
Explanation	The higher the specific heat of a material, the greater the energy needed to change its temperature.	The heavier the object, the greater the energy needed to change its temperature.	Energy through

QUESTION 29

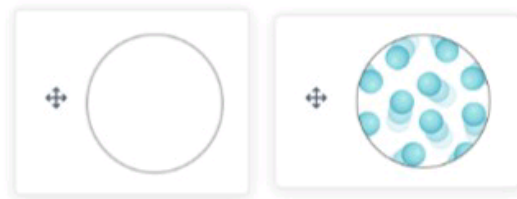
Drag and drop the images.

Heat is added to this ice cube. The ice cube is melting.

What happens to the arrangement of the particles during melting?



Before Melting	After Melting	



QUESTION 30

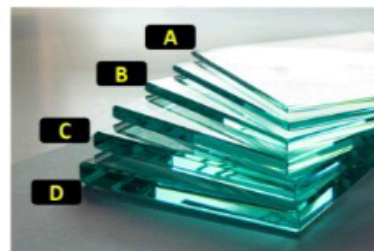
<https://moe.alefcd.com/teacher/716626082922104/lessons/lesson0591d992-3c64-4f4f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 25/61

9/29/22, 8:07 AM

Alef Frontend

Select the correct answer.

Which statement explains why **Glass A** heats up faster than **Glass D**?

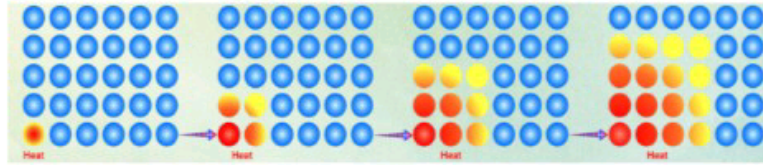


- ☐ Energy transfers faster through transparent objects.
- ☐ Energy transfer faster through thicker objects.
- ☐ Energy transfers faster through heavier objects.
- ☒ Energy transfers faster through thinner objects. ✓

QUESTION 31

Drag and drop the correct options to complete the sentence.

Drag and drop the correct options to complete the sentence.



<https://moe.alefed.com/teacher/71662608292210/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 26/61

9/29/22, 8:07 AM

Alel Frontend

This image shows the process of **conduction**. When the particles **collide**, the thermal energy from the hotter particles **transfers** to the colder particles.

radiation

expand

contract

convection

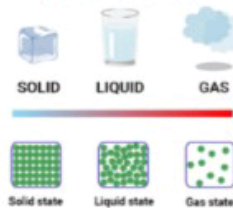
QUESTION 32



Drag and drop the correct words to complete the sentences.

During **condensation**, a gas changes into a liquid as its particles **lose energy**.

States of Matter



freezing

expand

evaporation

gain energy

QUESTION 33



<https://moe.alefed.com/teacher/71662608292210/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 27/61

9/29/22, 8:07 AM

Alel Frontend

Select the correct answer.

Polystyrene is a material that is normally used to serve hot drinks.

Which statement best explains why?



☐ Polystyrene is a good receiver object.

☐ Polystyrene has a high mass.

Select the correct answer.

Polystyrene is a material that is normally used to serve hot drinks.

Which statement best explains why?



☐ Polystyrene is a good receiver object.

☐ Polystyrene has a high mass.

☐ Polystyrene has a high surface area.

☒ Polystyrene has high specific heat.



QUESTION 34



Drag and drop the correct option to complete the sentence.

An object with a large mass takes to increase its temperature than an object with a smaller mass.



<https://moe.alefmed.com/teacher/71662608292210#lessonsLesson/0591d992-1c84-4f4f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 28/61

9/29/22, 8:07 AM

Alel Frontend



500 grams



200 grams

QUESTION 35



Drag and drop the options.

Order the ice cubes from the **greatest** to **least** amount of energy needed to change their temperature.

Greatest Amount of Energy Needed



500 grams



250 grams

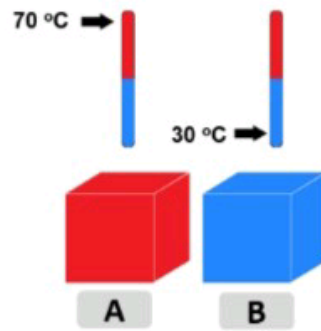


100 grams

Select the correct answers.

This image shows two blocks at different temperatures.

Which statements are true?



☐ Block A and B are in thermal equilibrium.

☐ Block B is hotter than Block A.

☐ Block A has less thermal energy than Block B.

☐ Block A and B have the same amount of thermal energy.

☒ Block A has more thermal energy than Block B. ✓

☒ Block A is hotter than Block B. ✓

<https://moe.alefled.com/teacher/716626082922104/lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 30/61

9/29/22, 8:07 AM

Alel Frontend

QUESTION 37



Select the correct answer choices.

How do you know that the image shows an example of thermal conduction?



☐ The fire is heating the air in the room making the room hot.

☐ The metal rod is not touching the fire.

☐ Heat is transferred from the metal rod to the fire.

☒ The metal rod is touching the fire. ✓

☒ The metal rod is hottest directly in the fire and cooler where it is farthest from the fire. ✓

☐ The fire is cooling the air in the room making the room cold.

Drag and drop the correct option to complete the sentence.

This thermos flask is an example of a(n)

closed system



. This is because the

thermos flask

does not exchange



energy with

the environment.



does exchange

open system

subsystem

QUESTION 39



Select the correct answer.

Which process would most likely heat up all the water in this kettle?



convection



radiation

conduction

<https://moa.alefled.com/teacher/716626082922104/lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/classidd936a0a-d175-4387-9272-730...> 32/61



magnetism

QUESTION 40



Drag and drop the correct terms to complete the sentence.

The ice is melting in the person's hands. This is an example

of conduction



. Heat is flowing from the

hands to the ice



ice to the hands

convection

ice to the environment

radiation

Select the correct answer from the drop-down menu to complete the sentences.

When enough heat is added to a liquid, it changes into a **gas** ✓. This is because the particles move faster and farther away from each other. This process is called

evaporation ✓.

<https://moe.alefed.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 33/61

9/29/22, 8:07 AM

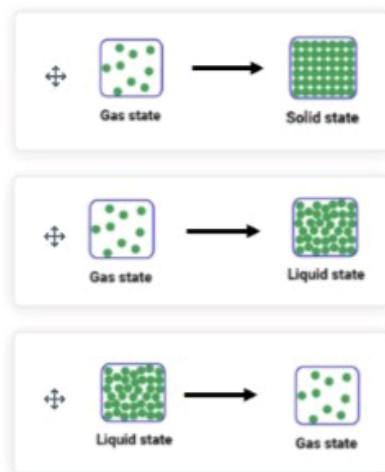
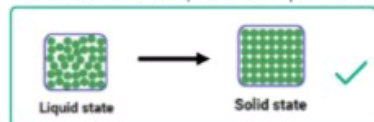
Alel Frontend

QUESTION 42



Drag and drop the correct option to complete the sentence.

The model that best represents the process of freezing is:



QUESTION 43



<https://moe.alefed.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 34/61

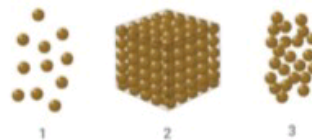
9/29/22, 8:07 AM

Alel Frontend

Select the correct answer.

The image shows the particles in a solid, a liquid, and a gas.

Which option has a correct description?



1

2

3

- ☐ image 2 is a gas
- ☐ image 1 is a solid
- ☐ image 3 is a solid
- ☒ image 1 is a gas ✓

QUESTION 44

Select the correct answers from the drop-down menus.

The particles that make up a gas are far apart from each other and easily move around.



<https://moe.alefedi.com/teacher/71662608292210w/lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 35/61

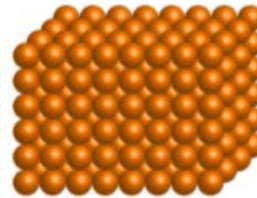
9/29/22, 8:07 AM

Alef Frontend

QUESTION 45

Select the correct answers.

This image shows how the particles are arranged in a substance.
Which statements correctly describe the substance?



☒ The substance is a solid.

☐ It has a fixed volume but not a fixed shape.

☐ The substance is a liquid.

☒ It has a fixed shape and a fixed volume.

☐ It has no fixed shape and no fixed volume.

☐ The substance is a gas.

QUESTION 46

<https://moe.alefedi.com/teacher/71662608292210w/lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 36/61

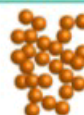
9/29/22, 8:07 AM

Alef Frontend

Drag and drop the correct options to complete the sentences.

• Liquids have a fixed volume, but not a fixed shape.

• The particle arrangement of liquids is:

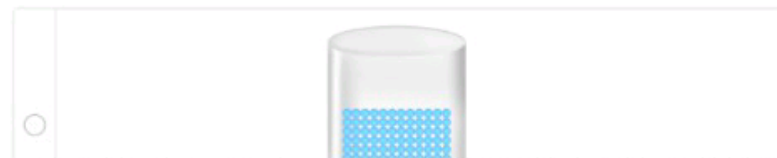


• An example of a liquid is:



Select the correct answer.

Which image shows the arrangement of particles for the state of matter with *no fixed shape* and *no fixed volume*?



<https://moe.alefnet.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 38/61

9/29/22, 8:07 AM

Alef Frontend



QUESTION 48



Select the correct answer.

Which image best represents the arrangement of particles in a gas?



Select the correct answer.

Which image best represents the arrangement of particles in a gas?



<https://moe.alefled.com/teacher/716626082922104/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 39/61

9/29/22, 8:07 AM

Alel Frontend



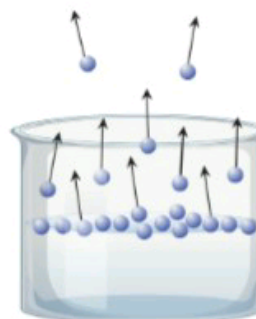
QUESTION 49



Select the best choice from the drop-down menu.

The process shown in this image is

evaporation ✓ ▼



QUESTION 50



Select the correct answer.

During which process does a gas turn into a liquid?

<https://moe.alefled.com/teacher/716626082922104/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 40/61

Select the correct answer.

During which process does a gas turn into a liquid?

<https://moe.alefled.com/teacher/71662608292210/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 40/61

9/29/22, 8:07 AM

Alef Frontend

☐ evaporation

☐ freezing

☒ condensation

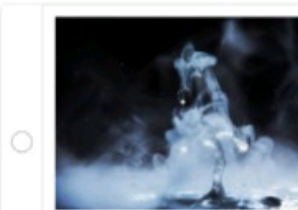
☐ melting

QUESTION 61

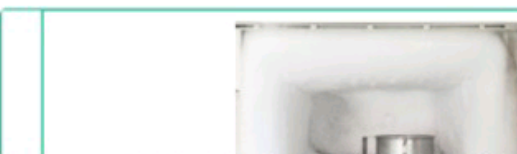


Select the correct answer.

Which image does **NOT** show energy being added to matter?



water evaporating



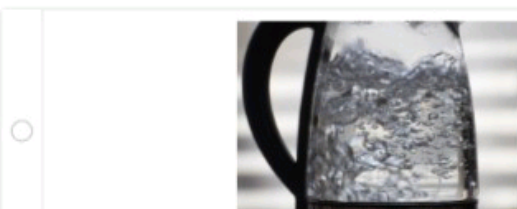
<https://moe.alefled.com/teacher/71662608292210/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 41/61

9/29/22, 8:07 AM

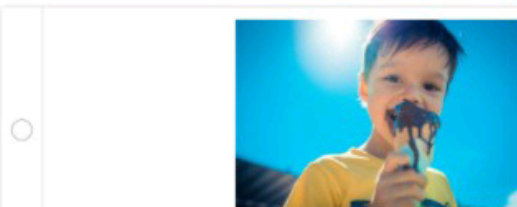
Alef Frontend



a mug of water placed in a freezer



water boiling in a kettle



ice melting in the Sun

Select the correct answers.

What happens to particles when heat is added to matter?

<https://moe.alefcd.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 42/61

9/29/22, 8:07 AM

Alef Frontend



☒ The particles move farther away from each other.



☐ The particles increase in size.

☐ The particles increase in volume.

☐ The particles move slower.

☐ The particles move closer together.

☒ The particles move faster.



QUESTION 63



Use the word bank to complete the sentence.

Word Bank			
Kinetic	Contract	Expand	Energy

<https://moe.alefcd.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 43/61

9/29/22, 8:07 AM

Alef Frontend

☒ Contract



means to decrease in volume.

QUESTION 64



Select the correct answer from the drop-down menu to complete the sentence.

The faster the particles in an object move, the higher the of the object.

QUESTION 65



Select the correct answer.

Which of the following describes particles of a hot solid object compared to those of a cold solid object?

- ☐ Particles of a hot solid object vibrate the same as the particles in a cold solid object.
- ☐ Particles of a hot solid object vibrate slower than the particles in a cold solid object.
- ☐ Particles of a hot solid object do not vibrate at all.

<https://moe.alefied.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 44/61

9/29/22, 8:07 AM

Alel Frontend

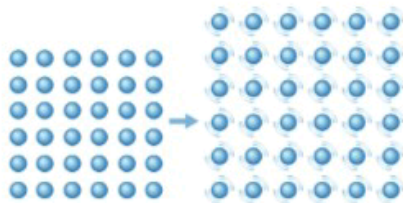
Particles of a hot solid object vibrate faster than the particles in a cold solid object. ✓

QUESTION 66



Select the correct answers.

Which of the following explains why this image shows the expansion of a substance?



- ☐ The size of the particles has increased.
- ☒ The volume of the substance has increased. ✓
- ☐ The space between the particles has decreased.
- ☒ The space between the particles has increased. ✓
- ☐ The volume of the substance has decreased.

<https://moe.alefied.com/teacher/71662608292210#lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 45/61

9/29/22, 8:07 AM

Alel Frontend

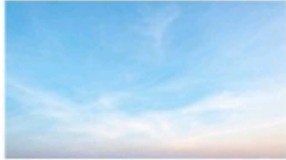
The particles have more kinetic energy. ✓

☐ The particles have less kinetic energy.

☐ The number of particles has increased.

Select the correct answer.

In which of the following substances will diffusion **NOT** occur?

- ☐ 
air - gas
- ☒ 
wood - solid

<https://moe.alelfd.com/teacher/71662608292210#/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 46/61

9/29/22, 8:07 AM

Alel Frontend

- ☐ 
milk - liquid
- ☐ 
water - liquid

QUESTION 58

Select the correct answer.

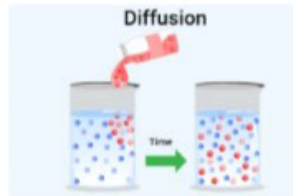
What happens when substances expand or contract?

- ☐ The size of their particles changes.
- ☒ The space between the particles changes.
- ☐ The volume of their particles changes.
- ☐ The particles undergo a chemical reaction.

<https://moe.alelfd.com/teacher/71662608292210#/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 47/61

Select the correct answer.

Which of the following would speed up the process of diffusion?



☐ freezing

☒ high temperature

☐ condensation

☐ low temperature

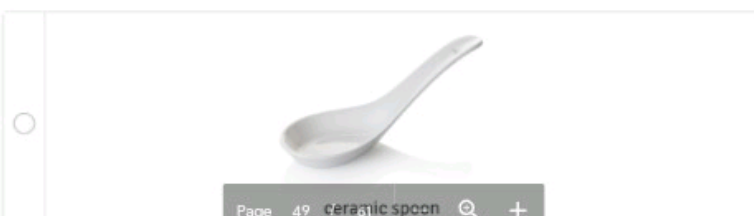
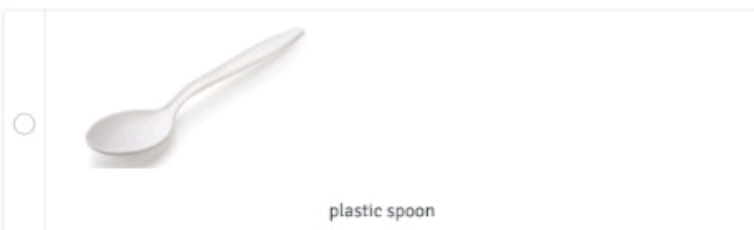
QUESTION 60

9/29/22, 8:07 AM

Alel Frontend

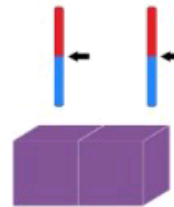
Select the correct answer.

Which spoon will most likely have the lowest specific heat?



Select the correct answers.

Two objects reach thermal equilibrium. What could be the temperature of the two objects?



Object 1	Object 2
50 °C	50 °C

☒

Object 1	Object 2
50 °C	30 °C

☐

Object 1	Object 2
20 °C	35 °C

☐

Object 1	Object 2
48 °C	50 °C

☐

<https://mooc.alef-ed.com/teacher/71662608292210/#lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 50/61

9/20/22, 8:07 AM

Alel Frontend

Object 1	Object 2
5 °C	5 °C

☒

Object 1	Object 2
60 °C	50 °C

☐

QUESTION 62



Select the best choice from the drop-down menus.

This bowl of hot noodles is an example of a(n)

open system ☒ This is because energy is

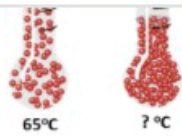
exchanged ☒ with the environment.



QUESTION 63



Select the best choice from the drop-down menus.



- ☐ 100°C
- ☒ 30°C ✓
- ☐ 90°C
- ☐ 70°C

QUESTION 76



Select the correct answers.

Why do railroad tracks have small gaps between the rails?

<https://mo.e.alef.net/teacher/71662608292210/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 60/61

9/29/22, 8:07 AM

Alel Frontend



- ☐ Railroad tracks expand at cooler temperatures.
- ☒ Railroad tracks expand in the heat. ✓
- ☐ The small gaps between the rails make the track stronger.
- ☐ The small gaps between the rails make the track longer.
- ☐ Railroad tracks contract in the heat.
- ☒ The small gaps between the rails stop the tracks from bending. ✓

<https://mo.e.alef.net/teacher/71662608292210/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 61/61

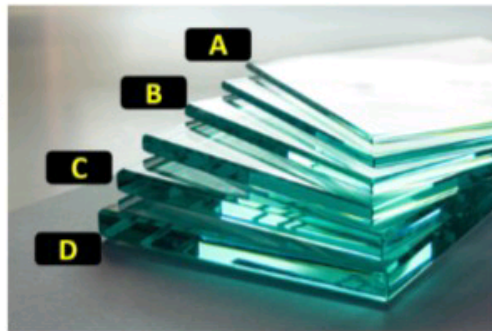
9/29/22, 8:07 AM

Alef Frontend

Thermal energy transfer will be fastest through

Glass A ✓ and slowest

through Glass D ✓.



QUESTION 64



Drag and drop the correct term to complete the sentence.

The specific heat of Insulators ✓ is higher than that of

conductors ✓.

⊕ temperature

⊕ thermometer

⊕ thermal energy

QUESTION 65



Select the correct answer.

Which type of heat transfer is shown in the image?

9/29/22, 8:07 AM

Alef Frontend



☐ conduction

☐ radiation

☒ convection ✓

☐ current

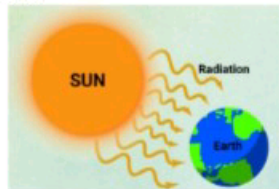
Select the correct answer.

How does energy travel by radiation?

<https://moe.alef-ed.com/teacher/716626082922104/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 53/61

9/29/22, 8:07 AM

Alef Frontend



- ☐ water waves
- ☒ electromagnetic waves ✓
- ☐ electric current
- ☐ sound waves

QUESTION 67



Select the correct answer.

Which state of matter has a fixed volume, but not a fixed shape?

- ☐ gas
- ☒ liquid ✓
- ☐ solid

<https://moe.alef-ed.com/teacher/716626082922104/lessons/lesson/0591d992-1c84-4f4f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 54/61

9/29/22, 8:07 AM

Alef Frontend

- ☐ vacuum

QUESTION 68



Select the correct answers.

Which of the following best represents the relationship between temperature and the kinetic energy of particles?

☐	Temperature	Kinetic Energy	
	→	←	

Which of the following best represents the relationship between temperature and the kinetic energy of particles?

☐

Temperature	Kinetic Energy
	

☒

Temperature	Kinetic Energy
	

☐

Temperature	Kinetic Energy
	

<https://moe.alefled.com/teacher/71662608292210#/lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 55/61

9/29/22, 8:07 AM

Alel Frontend

☐

Temperature	Kinetic Energy
	

☒

Temperature	Kinetic Energy
	

☐

Temperature	Kinetic Energy
	

QUESTION 69



Select the correct answer.

At which temperature would diffusion occur the slowest?

☒

5 °C

<https://moe.alefled.com/teacher/71662608292210#/lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/dd936a0a-d175-4387-9272-730...> 56/61

Drag and drop the correct answer.

Diffusion is defined as *the movement of particles from an area of higher concentration to an area of lower concentration.*

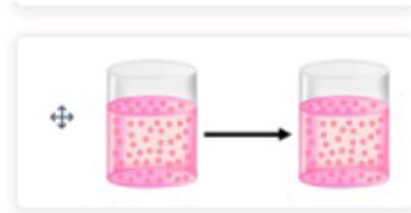
The image that best represents this process is:



<https://moe.alefied.com/teacher/71662608292210#/lessons/lesson/0591d992-1c84-414f-9a3b-000000046945/class/d936a0a-d175-4387-9272-730...> 57/61

9/29/22, 8:07 AM

Alel Frontend



QUESTION 71



Select the correct answer from the drop-down menu.

As substances get warmer, their volume

increases ✓ ▼

QUESTION 72



Use the word bank to complete the sentence.

Word Bank			
Kinetic	Contract	Expand	Energy

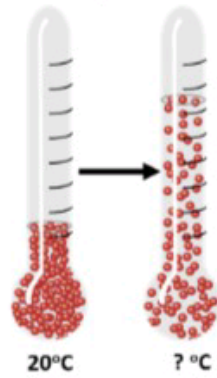
Expand



means to increase in volume.

Select the correct answer.

Which temperature would cause the liquid to expand in this thermometer?



- ☒ 60°C ✓
- ☐ 10°C
- ☐ 20°C
- ☐ -60°C

QUESTION 74

<https://mo.e.alefied.com/teacher/716620082922104/lessons/lesson0591d992-1c84-414f-9a3b-000000046945/class/d0936a0a-d175-4387-9272-730...> 59/61

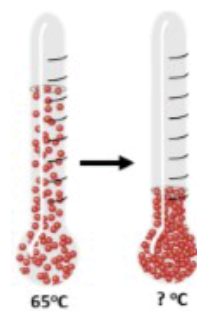
9/29/22, 8:07 AM

Alef Frontend

QUESTION 74

Select the correct answer.

Which temperature would cause the liquid in this thermometer to contract?



- ☐ 100°C
- ☒ 30°C ✓
- ☐ 90°C
- ☐ 70°C