What is a Civil Engineer?

Draw and label a picture of a civil engineer at work.

Explain your drawing of a civil engineer.
What is a Civil Engineer?

Draw a picture of a civil engineer at work. Label your picture.
1. What types of things would civil engineers work on? Circle **ALL** of the pictures below that show something a civil engineer would work on.

<table>
<thead>
<tr>
<th>Buildings</th>
<th>Computers</th>
<th>Cell phones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tunnels</td>
<td>Bridges</td>
<td>Bicycles</td>
</tr>
</tbody>
</table>

2. What other types of things would a civil engineers work on? List AT LEAST 2 things below.

____________________________________

____________________________________

____________________________________

____________________________________

____________________________________

____________________________________
1. What types of things would civil engineers work on? Circle **ALL** of the pictures below that show something a civil engineer would work on.

- Buildings
- Computers
- Cell phones
- Tunnels
- Bridges
- Bicycles

2. In the box below, Draw 1 other thing a civil engineer would work on. Label your picture.
1. What kinds of bridges are these? Draw lines to the correct names.

- Arch Bridge
- Beam Bridge
- Suspension Bridge

2. The pictures below show three streams. Which kind of bridge listed in question 1 do you think would work BEST to help someone cross each stream? Write the name of the bridge next to the pictures below.

<table>
<thead>
<tr>
<th>Type of stream</th>
<th>What type of bridge would you use to cross?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short, shallow distance to cross</td>
<td></td>
</tr>
<tr>
<td>Wide, shallow distance to cross</td>
<td></td>
</tr>
<tr>
<td>Wide, deep space to cross</td>
<td></td>
</tr>
</tbody>
</table>
1. What kinds of bridges are these? Draw lines to the correct names.

- Arch Bridge
- Beam Bridge
- Suspension Bridge

2. The pictures below show three streams. Which kind of bridge do you think would work BEST to help someone cross each stream? Circle the name of the bridge next to the pictures below.

<table>
<thead>
<tr>
<th>Type of stream</th>
<th>What type of bridge would you use to cross?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short, shallow distance to cross</td>
<td>Suspension Bridge, Beam Bridge</td>
</tr>
<tr>
<td>Wide, shallow distance to cross</td>
<td>Arch Bridge, Suspension Bridge</td>
</tr>
<tr>
<td>Wide, deep space to cross</td>
<td>Suspension Bridge, Arch Bridge</td>
</tr>
</tbody>
</table>
Directions: Draw arrows on the picture below to show AT LEAST 4 of the forces (pushes and pulls) that are acting on the boy and things in the picture.
A girl places a board across a stream to make a bridge, but her bridge sags when she stands on it.

1. What can she do to improve her bridge? Sketch your design in the box below. Label all of the parts.

2. Explain your drawing. 

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
A girl places a board across a stream to make a bridge, but her bridge sags when she stands on it.

1. What can she do to improve her bridge? Sketch your design in the box below. Label all of the parts.
What is a Civil Engineer?

Draw and label a picture of a civil engineer at work.

A good picture would show someone designing public structures such as buildings, bridges, roads, and water systems. They may be drawing plans or discussing their ideas with others. They would NOT be doing the actual construction of the building (this is a common misconception).

Explain your drawing of a civil engineer:

Answers will vary, but may include: someone concerned with the design and of public structures, such as buildings, bridges, roads, and water systems. Be on the lookout for the common misconception that civil engineers do the actual construction of these structures.
What is a Civil Engineer?

Draw a picture of a civil engineer at work. Label your picture.

A good picture would show someone designing public structures such as buildings, bridges, roads, and water systems. They may be drawing plans or discussing their ideas with others. They would NOT be doing the actual construction of the building (this is a common misconception).
1. What types of things would civil engineers work on? Circle **ALL** of the pictures below that show something a civil engineer would work on.

<table>
<thead>
<tr>
<th>Buildings</th>
<th>Computers</th>
<th>Cell phones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tunnels</td>
<td>Bridges</td>
<td>Bicycles</td>
</tr>
</tbody>
</table>

2. What other types of things would a civil engineers work on? List AT LEAST 2 things below. 

*Answers will vary, but may include: roads, water systems, sewers, railways, etc.*
1. What types of things would civil engineers work on? Circle **ALL** of the pictures below that show something a civil engineer would work on.

Circle the following:
- buildings
- computers
- Cell phones
- tunnels
- bridges
- bicycles

2. In the box below, Draw 1 other thing a civil engineer would work on. Label your picture.

A good picture would show some kind of public structure such as a road, a water systems, a sewer system, or a railway.
1. What kinds of bridges are these? Draw lines to the correct names.

![Bridge Diagrams]

Arch Bridge
Beam Bridge
Suspension Bridge

2. The pictures below show three streams. Which kind of bridge listed in question 1 do you think would work BEST to help someone cross each stream? Write the name of the bridge next to the pictures below.

<table>
<thead>
<tr>
<th>Type of stream</th>
<th>What type of bridge would you use to cross?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short, shallow distance to cross</td>
<td>Beam Bridge</td>
</tr>
<tr>
<td>Wide, shallow distance to cross</td>
<td>Arch Bridge or Beam Bridge</td>
</tr>
<tr>
<td>Wide, deep space to cross</td>
<td>Suspension Bridge</td>
</tr>
</tbody>
</table>
1. What kinds of bridges are these? Draw lines to the correct names.

- Arch Bridge
- Beam Bridge
- Suspension Bridge

2. The pictures below show three streams. Which kind of bridge do you think would work BEST to help someone cross each stream? Circle the name of the bridge next to the pictures below.

<table>
<thead>
<tr>
<th>Type of stream</th>
<th>What type of bridge would you use to cross?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short, shallow distance to cross</td>
<td>Suspension Bridge</td>
</tr>
<tr>
<td>Wide, shallow distance to cross</td>
<td>Arch Bridge</td>
</tr>
<tr>
<td>Wide, deep space to cross</td>
<td>Suspension Bridge</td>
</tr>
</tbody>
</table>
Directions: Draw arrows on the picture below to show AT LEAST 4 of the forces (pushes and pulls) that are acting on the boy and things in the picture.

The bench pushing up on the lunchbox
The bench pushing up on the boy
The boy pushing down on the bench
The lunchbox pushing down on the bench

Note to teacher: Your students may also come up with other answers such as: the bench pushing down on the ground, the ground pushing up on the bench, gravity, boy’s feet pushing down on the ground, ground pushing up, the boy’s feet, etc. Answers will vary.
A girl places a board across a stream to make a bridge, but her bridge sags when she stands on it.

1. What can she do to improve her bridge? Sketch your design in the box below. Label all of the parts.

2. Explain your drawing.

Answers will vary, but may include: support the middle of the bridge, use a stiffer board or type of material, design a suspension or other type of bridge, etc.
A girl places a board across a stream to make a bridge, but her bridge sags when she stands on it.

1. What can she do to improve her bridge? Sketch your design in the box below. Label all of the parts.

A good picture might show a support the middle of the bridge, a stiffer board or other type of material, a suspension bridge or other type of bridge, etc.