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Disclaimer

Any resources such as texts, websites and so on that may be referred to in this document are provided as examples of resources that teachers can use to support their learning programs. Their inclusion does not imply that they are mandatory or that they are the only resources relevant to the course.
Sample assessment task

Physics – General Year 11

Task 3 – Unit 1

Assessment type: Science inquiry – Investigation

Conditions
Time for the task: 90 minutes

Task weighting
10% of the school mark for this pair of units

Task 3: Investigation of refraction and critical angle

Refraction is the change in direction of light waves as they travel through different media.

Your group’s task is to use a light box to investigate the amount of refraction caused by different materials e.g. crown glass, water, glass, plastic.

Class discussion: How can the change in direction of light as it passes through different media be measured?

Part A: Refraction

• Investigate the bending of light as it travels through different substances.
• Decide how you can measure this.
• Do different substances change the direction of light by different amounts?
• Which of the substances that you tested had the highest refractive index (bent light the most)?
• Refractive indices can be calculated using Snell’s Law: $n_1 \sin i = n_2 \sin r$
• Calculate the refractive index of one of your materials using your data.

Part B: Critical angle

• Increase the angle of incidence and observe the angle at which the light stops exiting the substance and instead reflects back into it (total internal reflection).
• Draw a diagram of the light ray as it enters the material and reflects off the internal surface of the material. From your measurements, determine the angle of incidence at which total internal reflection first occurs in each material. This is the critical angle for the material.
• Is this angle the same for each substance?
• Is there a relationship between the refractive index of a material and the angle where the light is totally internally reflected (critical angle)?
Stages of the Investigation

Stage 1 – Planning
In groups, plan Parts 1 and 2 of the investigation, and decide which equipment you will need. Use the *Planning and Report Worksheet for Science Investigations*.

Stage 2 – Conducting
Conduct Parts A and B of the investigation.

Stage 3 – Processing
Record your group’s results for Part A and Part B, and process them by answering the questions. Evaluate your investigation and repeat any section, if needed.

Stage 4 – Evaluation
Write a report on the investigation and submit it.

Use the following *Planning and Report Worksheet for Science Investigations* to assist with writing up your investigation.
Planning and Report Worksheet for Science Investigations

Student name

______________________________

Other members of your group

______________________________

______________________________

Stage 1 – Planning (8 marks)

What is the question you are investigating?

__________________________________________________________________________________

__________________________________________________________________________________

What do you know about this topic from personal experience and from science?

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

Which variables may affect the phenomenon you are investigating?

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

Which of the variables are you going to investigate as your independent variable? (This is the variable you will change to see what effect it has on the dependent variable.)

__________________________________________________________________________________

__________________________________________________________________________________

How will the independent variable be changed in the experiment?

__________________________________________________________________________________

__________________________________________________________________________________
What is the dependent variable (i.e. the variable that responds to changes in the independent variable)?
__________________________________________________________________________________
__________________________________________________________________________________

How will you measure the dependent variable?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Predict what you think will happen. Explain why.
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Which variables are to be controlled (kept constant) to make it a fair test?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Describe your experimental set-up using a labelled diagram and explain how you will collect your data.
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
Are there any special safety precautions?

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Stage 2 – Conducting (13 marks)

Carry out some preliminary trials. Were there any problems?

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

How did you modify your experiment to fix the problems, if there were problems?

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Collect and record the data you need to test your hypothesis. Draw your data table here. Organise your results in a clear, logical manner.

Title of table: ________________________________________________________________
Calculate the refractive index of one of your samples. Show your working.

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Stage 3 – Processing (9 marks)

Analyse your data. Are there any patterns or trends in your data? What is the relationship between the variables you have investigated? Is the hypothesis supported by the data?

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Use science concepts to explain the patterns, trends or relationships you have identified in your data. What is your conclusion?

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
Stage 4 – Evaluation (6 marks)

What were the main sources of experimental error?

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

How confident are you with your conclusions? How much uncertainty/error is associated with your data?

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

How could the design of the experiment have been improved to reduce error?

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

What have you learned about the topic of your investigation? Was the outcome different from your prediction? Explain.

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

What have you learned about the methods of investigating in science?

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________
ACKNOWLEDGEMENTS

Planning and Report Worksheet questions
## Marking key for sample assessment task 3 – Unit 1

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 1 – Planning</strong></td>
<td></td>
</tr>
<tr>
<td>Develops a clear hypothesis which relates the variables</td>
<td>1–2</td>
</tr>
<tr>
<td>Lists all materials required</td>
<td>1–2</td>
</tr>
<tr>
<td>States how controlled variables were controlled (aligning edge of sample exactly with ruled line etc.)</td>
<td>1–2</td>
</tr>
<tr>
<td>Plans for repeat trials (at same angle, at different angles)</td>
<td>1–2</td>
</tr>
<tr>
<td><strong>Stage 2 – Conducting</strong></td>
<td>/8</td>
</tr>
<tr>
<td>Clearly lists the procedure to be used:</td>
<td></td>
</tr>
<tr>
<td>• produce narrow light ray</td>
<td>1–5</td>
</tr>
<tr>
<td>• carefully trace rays and border of sample</td>
<td></td>
</tr>
<tr>
<td>• construct normals and measure angles of incidence and refraction</td>
<td></td>
</tr>
<tr>
<td>• repeat with different angles of incidence</td>
<td></td>
</tr>
<tr>
<td>• increase angle of incidence until total internal reflection occurs</td>
<td>1–2</td>
</tr>
<tr>
<td>Shows a labelled diagram or photograph of equipment set-up</td>
<td>1–2</td>
</tr>
<tr>
<td>Selects appropriate equipment and collects accurate results</td>
<td>1–2</td>
</tr>
<tr>
<td>Constructs a labelled diagram showing total internal reflection</td>
<td>1–2</td>
</tr>
<tr>
<td>Displays data in suitable format</td>
<td>1–2</td>
</tr>
<tr>
<td><strong>Stage 3 – Processing</strong></td>
<td>/13</td>
</tr>
<tr>
<td>Averages data from repeat trials</td>
<td>1–2</td>
</tr>
<tr>
<td>Calculates refractive index correctly</td>
<td>1–2</td>
</tr>
<tr>
<td>Makes a valid statement about trends in the data (compares different materials, relates refractive index and critical angle)</td>
<td>1–3</td>
</tr>
<tr>
<td>States conclusion and relates it to the hypothesis</td>
<td>1–2</td>
</tr>
<tr>
<td><strong>Stage 4 – Evaluation</strong></td>
<td>/9</td>
</tr>
<tr>
<td>Discusses sources of uncertainty in the data</td>
<td>1–2</td>
</tr>
<tr>
<td>Makes reasonable suggestions for improvements to procedure (e.g. draw thinner lines, align eye with rays)</td>
<td>1–2</td>
</tr>
<tr>
<td>Uses appropriate scientific terminology in the discussion</td>
<td>1–2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>/36</td>
</tr>
</tbody>
</table>
Sample assessment task

Physics – General Year 11

Task 4 – Unit 1

Assessment type: Extended response

Conditions
Period allowed for completion of the task: 3 weeks

Task weighting
15% of the school mark for this pair of units

Task 4 Extended response: Vision in animals

Class discussion

• How does the lens in the eye help us to see?
• How do other parts of the eye help us to see?
• How would changing the shape of the lens affect vision?
• Do all animals have the same shaped lens?

Your task is to select one vertebrate animal (e.g. horse, eagle, mouse, fish, snake, frog) and one invertebrate animal (e.g. spider, fly, ant, snail, crab, scorpion, bee) and research how they see the world.

Questions you should try to answer about each animal include:

• What type of images does the animal see?
• Can the animal see all the colours visible to humans?
• Can the animal perceive waves from outside the visible spectrum?
• Does its eyes have a focusing mechanism? How does it work?
• Compare the vision systems of your two selected animals and relate them to the requirements of the animal (e.g. if the animal is nocturnal, how does its vision help it; if the animal is a hunter, how is its vision adapted for this).

Present your findings as a poster or a multimedia presentation. Be prepared to discuss your presentation with class members and answer relevant questions.

Include a list of at least three (3) references that you used for your research. Where web-based resources are used, give the html address, the date accessed, and, ideally, the author and/or publisher.
Marking key for sample assessment task 4 – Unit 1

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research on vision systems</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Vertebrate</strong></td>
<td></td>
</tr>
<tr>
<td>Describes the type of images perceived</td>
<td>1–2</td>
</tr>
<tr>
<td>Describes the type of waves perceived</td>
<td>1–2</td>
</tr>
<tr>
<td>Describes the focusing mechanism</td>
<td>1–2</td>
</tr>
<tr>
<td><strong>Invertebrate</strong></td>
<td></td>
</tr>
<tr>
<td>Describes the type of images perceived</td>
<td>1–2</td>
</tr>
<tr>
<td>Describes the type of waves perceived</td>
<td>1–2</td>
</tr>
<tr>
<td>Describes the focusing mechanism</td>
<td>1–2</td>
</tr>
<tr>
<td>Compares the vision systems of vertebrate and invertebrate</td>
<td>1–2</td>
</tr>
<tr>
<td>Compares the images perceived by vertebrate and invertebrate</td>
<td>1–2</td>
</tr>
<tr>
<td>Relates vertebrate’s vision to its vision functioning</td>
<td>1–2</td>
</tr>
<tr>
<td>Relates invertebrate’s vision to its vision functioning</td>
<td>1–2</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td></td>
</tr>
<tr>
<td>Presents information clearly and logically</td>
<td>1–3</td>
</tr>
<tr>
<td>Lists references (at least three)</td>
<td>1–3</td>
</tr>
<tr>
<td>Discusses presentation with class or group</td>
<td>1–4</td>
</tr>
<tr>
<td>Answers relevant questions</td>
<td>1–2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>/32</td>
</tr>
</tbody>
</table>
Sample assessment task

Physics – General Year 11

Task 7 – Unit 2

Assessment type: Test

Conditions
Time for the task: 45 minutes under test conditions

Task weighting
8% of the school mark for this pair of units

Task 7: Heat test

Student name ______________________     Total marks = 45

Question 1 (9 marks)
a. People wear clothing to keep warm on a cool day. Explain how this works. (4 marks)

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

b. When someone has been in an accident and is in shock, paramedics wrap the person in a survival blanket made from shiny silver plastic foil to keep the person warm. How does this blanket work? (2 marks)

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

c. When we are hot, we sweat. How does this help to cool us down? (3 marks)

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

__________________________________________________________________________________
Question 2 (7 marks)
A sample of tertiary butanol is gently heated for 13 minutes and the temperature is recorded. Use the heating curve below to answer the questions that follow.

---

a. For tertiary butanol, identify the
   (i) melting point ___________________________
   (ii) boiling point ___________________________ (2 marks)

b. What is the name given to the process occurring between 3 and 4.5 minutes?
   ________________________________________________________________________________ (1 mark)

c. Is heat absorbed or released during the process occurring between 3 and 4.5 minutes?
   ________________________________________________________________________________ (1 mark)

d. Explain what is happening to the behaviour of the butanol particles between 5 and 10 minutes.
   ________________________________________________________________________________ (2 marks)
e. Name the process occurring between 10 and 12.5 minutes. (1 mark)

Question 3 (6 marks)

a. In areas where summers are hot, house designers do not recommend installing dark roofs on houses as it makes the houses hotter. Explain why this is so. (2 marks)

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

b. Describe two design features (other than roof colour) that can be used in houses to keep them cooler in summer or warmer in winter. Explain why each of these design features works. (4 marks)

Feature one

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

Feature two

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

Question 4 (4 marks)

A metal pot filled with water is placed on a gas burner to heat it. Name the heat transfer processes occurring during:

a. transfer of heat from the flame to the metal pot (two processes). (2 marks)

__________________________________________________________________________________

__________________________________________________________________________________

b. transfer of heat through the metal of the pot. (1 mark)

__________________________________________________________________________________

c. transfer of heat throughout the water. (1 mark)

__________________________________________________________________________________
Question 5

To minimise temperature fluctuations in buildings, large amounts of concrete can be used. The concrete absorbs excess heat when it is hot and releases it when the weather is cold. Newer materials called phase-change materials can also be used for this purpose. These materials absorb excess heat by changing from solid to liquid and release it when it is cold by changing from liquid to solid.

A building designer makes some measurements to compare the properties of concrete and a phase-change material and their use in helping to control house temperatures.

The designer heats 100 kg of the concrete so its temperature increases by 10 °C and measures the amount of heat energy it absorbs. The concrete has a specific heat capacity, \( c \) of 920 J kg\(^{-1}\) K\(^{-1}\).

Use the equations \( Q = mc\Delta T \) and \( Q = mL \) to answer the following questions.

a. Calculate the amount of heat absorbed by the concrete as its temperature rises by 10 °C.
   (2 marks)

b. If the phase-change material being investigated has a latent heat of fusion of \( 1.89 \times 10^5 \) J kg\(^{-1}\), what mass of the material is needed to absorb the same amount of heat as the 100 kg of concrete? (2 marks)

c. Identify two advantages of using the phase-transfer material to help control the house’s temperature instead of concrete. (2 marks)

d. Describe the behaviour of the particles in the phase-change material as it initially warms. (2 marks)

e. Describe the behaviour of the particles in the phase-change material as it melts. (2 marks)
f. As the phase-change material melts, its temperature is constant even though it is being heated. What is the heat energy being used for during melting (refer to the energy of the particles)?

(2 marks)

Question 6
Joel and Bec are doing an experiment with balloons to investigate the relationship between pressure, volume and temperature. Fill in their observations in the table below using the words increased, decreased or same.

(7 marks)

<table>
<thead>
<tr>
<th>Action</th>
<th>Pressure</th>
<th>Volume</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joel blows into the balloon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bec ties the balloon tightly and puts it into a bowl of hot water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joel squeezes the tied balloon with his hands</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Marking key for sample assessment task 7 – Unit 2

Heat test

Total marks = 45

Q1
a. People wear clothing to keep warm on a cool day. Explain how this works.
b. When someone has been in an accident and is in shock, paramedics wrap the person in a survival blanket made from shiny silver plastic foil to keep the person warm. How does this blanket work?
c. When we are hot, we sweat. How does this help to cool us down?

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. People radiate body heat</td>
<td>1</td>
</tr>
<tr>
<td>Body heat warms the air near the body</td>
<td>1</td>
</tr>
<tr>
<td>Clothing keeps the layer of warm air near the body</td>
<td>1</td>
</tr>
<tr>
<td>Clothing is an insulator</td>
<td>1</td>
</tr>
<tr>
<td>b. People radiate body heat</td>
<td>1</td>
</tr>
<tr>
<td>The silver blanket reflects the radiated heat back to the body</td>
<td>1</td>
</tr>
<tr>
<td>c. Sweating produces a layer of moisture on the skin</td>
<td>1</td>
</tr>
<tr>
<td>In order to evaporate, sweat needs to absorb heat</td>
<td>1</td>
</tr>
<tr>
<td>Sweat absorbs heat from the body, cooling it down</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>/9</td>
</tr>
</tbody>
</table>

Q2
a. For tertiary butanol, identify the
   (i) melting point
   (ii) boiling point
b. What is the name given to the process occurring between 3 and 4.5 minutes?
c. Is heat absorbed or released during the process occurring between 3 and 4.5 minutes?
d. Explain what is happening to the behaviour of the butanol particles between 5 and 10 minutes.
f. Name the process occurring between 10 and 12.5 minutes.

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. (i) melting point = 26 °C ± 1</td>
<td>1</td>
</tr>
<tr>
<td>(ii) boiling point = 82 °C ± 1</td>
<td>1</td>
</tr>
<tr>
<td>b. melting (or fusion)</td>
<td>1</td>
</tr>
<tr>
<td>c. absorbed</td>
<td>1</td>
</tr>
<tr>
<td>d. particles are moving faster due to increased kinetic energy</td>
<td>1–2</td>
</tr>
<tr>
<td>e. boiling or vaporisation</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>/7</td>
</tr>
</tbody>
</table>
Q3
a. In areas where summers are hot, house designers do not recommend installing dark roofs on houses as it makes the houses hotter. Explain why this is so.
b. Describe two design features (other than roof colour) that can be used in houses to keep them cooler in summer or warmer in winter. Explain why each of these design features works.

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Dark surfaces absorb radiated heat from the sun</td>
<td>1</td>
</tr>
<tr>
<td>They do not reflect the heat away, so house is hotter</td>
<td>1</td>
</tr>
<tr>
<td>b. Design feature described</td>
<td>1 x 2</td>
</tr>
<tr>
<td>Uses physics principles to explain how design feature works (x2 examples)</td>
<td>1 x 2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>/6</td>
</tr>
</tbody>
</table>

Answer could include, but is not limited to:
- North-facing windows let winter sun in
- Insulation in the roof and walls keeps winter heat in/summer heat out
- Curtains with pelmets keep heat in/out because they form a layer of insulating air
- Double-glazed windows provide a layer of insulating air
- Deciduous trees planted on north aspect

Q4
A metal pot filled with water is placed on a gas burner to heat it. Name the heat transfer processes occurring during
a. transfer of heat from the flame to the metal pot
b. transfer of heat through the metal of the pot
c. transfer of heat throughout the water.

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. radiation and convection</td>
<td>1–2</td>
</tr>
<tr>
<td>b. conduction</td>
<td>1</td>
</tr>
<tr>
<td>c. convection (current)</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>/4</td>
</tr>
</tbody>
</table>
Q5
a. Calculate the amount of heat absorbed by the concrete as its temperature rises by 10 °C.
b. If the phase-change material being investigated has a latent heat of fusion of $1.89 \times 10^5$ J kg$^{-1}$, what mass of the material is needed to absorb the same amount of heat as the 100 kg of concrete?
c. Identify two (2) advantages of using the phase-transfer material to help control the house’s temperature instead of concrete.
d. Describe the behaviour of the particles in the phase-change material as it initially warms.
e. Describe the behaviour of the particles in the phase-change material as it melts.
f. As the phase-change material melts, its temperature is constant even though it is being heated. What is the heat energy being used for during melting (refer to the energy of the particles)?

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Recognition that $Q = mc\Delta T$ needed to solve problem</td>
<td>1</td>
</tr>
<tr>
<td>$Q = 100 \times 920 \times 10 = 920 000$ J</td>
<td>1</td>
</tr>
<tr>
<td>b. Recognition that $Q = mL$ needed to solve problem</td>
<td>1</td>
</tr>
<tr>
<td>$m = \frac{Q}{L} = \frac{920000}{1.89 \times 10^5} = 4.87$ kg (accept follow through mass if value for a is incorrect)</td>
<td>1</td>
</tr>
<tr>
<td>c. Any two reasonable responses such as lower mass of PCM needed; reduced energy required for building leading to reduced carbon footprint of building; quicker construction time; simpler installation</td>
<td>1–2</td>
</tr>
<tr>
<td>d. Particles vibrate faster</td>
<td>1</td>
</tr>
<tr>
<td>Particles spread apart</td>
<td>1</td>
</tr>
<tr>
<td>e. Particles break out of their solid lattice</td>
<td>1</td>
</tr>
<tr>
<td>Particles move past each other</td>
<td>1</td>
</tr>
<tr>
<td>f. Latent heat is being used to give particles potential energy</td>
<td>1</td>
</tr>
<tr>
<td>Heat energy is being used to increase separation between particles and enable them to break out of their lattice</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>/12</td>
</tr>
</tbody>
</table>

Q6
Joel and Bec are doing an experiment with balloons to investigate the relationship between pressure, volume and temperature. Fill in their observations in the table below using the words increased, decreased or same.

<table>
<thead>
<tr>
<th>Action</th>
<th>Pressure</th>
<th>Volume</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joel blows into the balloon</td>
<td>Increased(1)</td>
<td>Increased(1)</td>
<td></td>
</tr>
<tr>
<td>Bec ties the balloon tightly and puts it into a bowl of hot water</td>
<td>Increased(1)</td>
<td>Increased(1)</td>
<td>Increased(1)</td>
</tr>
<tr>
<td>Joel squeezes the tied balloon with his hands</td>
<td>Increased(1)</td>
<td>Decreased(1)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>/7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>