



WOW!
BUSINESS

Dog and Bone

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Resources for Courses

Teacher Instructions

‘Dog and Bone’ is a 10 – 15 minute introductory activity illustrating the potential for ‘diseconomies of scale’. The primary function of the activity is to illustrate that as the size of the group taking part in the activity increases the quality of the outcome diminishes. The activity is attempting to mimic some of the causes of diseconomies of scale such as:

- The re-interpretation of ‘commands’ as the chain of people involved increases
- The issue of how a group outcome can be affected when one or more members do not possess the correct skills
- How a part of production towards the end of a process can be affected by an earlier part.

Resources needed

The teacher will need:

- A copy of the ‘dog and bone’ illustration (page 6 of this resource)
- 8 – 10 blank pieces of paper (re-cycled paper is fine as long as the paper is not folded and one side is completely blank)
- A pencil or pen to be used by the drawing student.

Before starting, mark each of the blank pieces of paper with a number increasing from 1 to 10 (or however many the teacher wishes to get involved in the activity) in a discrete corner. This numbering will be used at the end of the activity to show the ‘chain’ activity from the first to last person involved.

Set up the classroom so that the illustration is faced down (and can’t be seen) at the front, with the blank pieces of paper and pen nearby. The participating students will also need a seat whilst taking part.



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Running the Activity

This activity uses between 8 and 10 students from a group. The rest of the group will be passive observers.

Determine who are the 8 (to 10) students to take part in the activity either by asking for volunteers or choosing them deliberately.

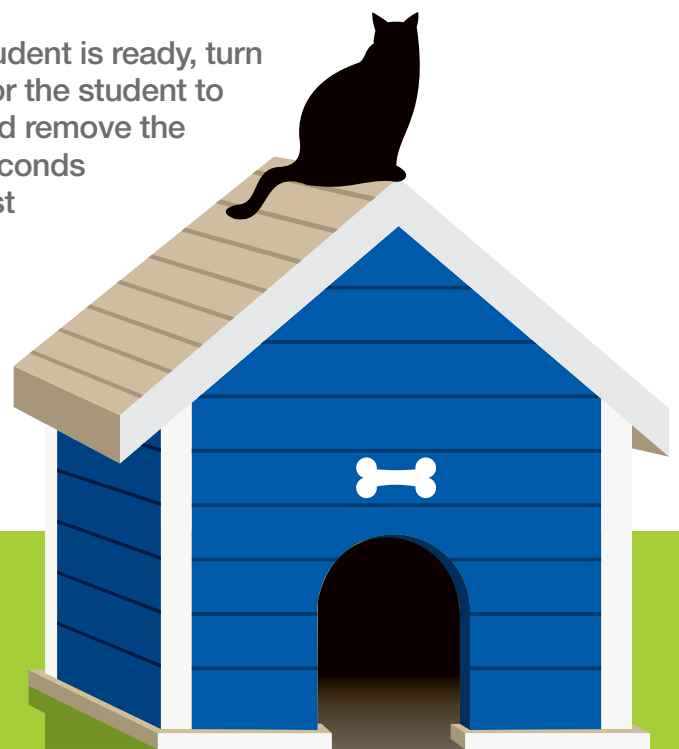
Inform the students that the name of the game is 'Dog and Bone' and then ask them to leave the room. Ideally, the students should be placed in a holding room whilst they are waiting but they can be left in the corridor as long as they are unable to see what is going on in the classroom.

Tell the remaining students what is about to happen. One student will be asked to come back in to the room, shown an image that they must remember and then re-draw that image. Once they have done this, the other students will repeat the process but will use the previous student's drawing as the image to remember.

Invite the first student to come back in to the room (you can allow the rest of the group to choose the order of the students taking part) and sit them at the front of the class. Remind them that the name of the game is 'Dog and Bone'. Inform them what is about to happen....

"You are about to look at an image for 30 seconds. During those 30 seconds you must do nothing other than look and remember the image. You must not draw or do anything other than look at the image. When the 30 seconds have finished the original image will be taken away and you must re-draw that image on the blank piece of paper in front of you."

When you are satisfied that the participating student is ready, turn over the original image and allow 30 seconds for the student to memorise it. When the 30 seconds have finished remove the original image and tell the student he has 30 seconds to re-draw that image. You may wish (on the first occasion) to give the student more than 30 seconds to re-draw the image. When they have finished ask the students to go back to their original seat and show the whole class this first drawing. Place the drawing face down.



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Invite the second student back in to the class room and repeat the process. Don't forget to remind them that the name of the game is 'Dog and Bone'. You can tell them that the drawing they are about to see has been drawn by the previous student. Repeat the process, giving this second student 30 seconds to memorise the drawing and then a further 30 seconds to re-draw the image. Show the whole class this second drawing.

Repeat this process with the remaining students. You may find that you can start to reduce the amount of time given to memorise and re-draw the image until eventually you may only give students 15 to 20 seconds.

When all 8 (to 10) have completed the activity, place the drawings out alongside one another (including the original illustration) and ask for comments on the quality of outcomes from the group.

The Outcome

The final drawing will, undoubtedly be a very poor version of the original illustration. It is possible that many of the details have been completely lost – the dog may no longer even look like a dog. Some students will have mis-interpreted the small circle at the top of the kennel and this may have become something completely different.

The dish at the front of the image may have become a bone as the use of the title of the game may have caused a subliminal confusion about some aspects of the image.

Occasionally, the image may have metamorphosed into more than one animal!

Reviewing the outcome

Ask the students what aspects of the final image are similar to the original. Then ask why the final image is so different to the original.

Their answers may include:

- Artistic skills of the drawer
- Ability to memorise
- Time constraints place on the drawers
- Interpretation of one drawer then impacted on the others

Try and identify where one aspect of the image started to go very awry – for example, when the bowl stopped looking like a bowl or the dog's legs or tail disappeared.



Applying the outcome

When activity and questions have finished, explain how it illustrates the issues relating to diseconomies of scale:

- The larger the 'chain of command' the more likely that those towards the end receive a different version of the original orders. Messages can become blurred or confused the further down the line that they proceed.
- The chain of command allows for one person to have an unduly high impact on the final outcome (e.g. if drawer 4 was particularly bad at drawing). This may be the case if a middle manager or supervisor is less able in their job
- It illustrates the problem of interpretation – how even competent and skilled workers may interpret things differently.



