

Friction Sorting Activity

Not much friction?

A lot of friction?

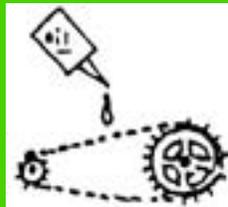
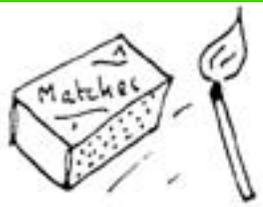
Useful?

a tight ring
stuck on
your finger



skidding on a wet road

striking a
match



oil on a
bicycle
chain

a landslide of
wet mud and
rocks



the brakes
on a bicycle



Not useful?



no oil in a
car engine

Friction

Originally devised by Peter Wardle when at Southwark Language Centre in the 1987, (he drew the pictures!) and added to by the support department at Morpeth School in Tower Hamlets. We have now added the original drawings. This activity of filling a matrix has proved very popular with children and a useful prequel to those experiments of sliding your trainers down a piece of wood. This activity is a good way to discover that English does not have a word to describe "not-friction". All the instructions are on the relevant sheets.

The webaddress for this activity is:

<<http://www.collaborativelearning.org/friction.pdf>>. Last updated 23rd March 2016.

Our talk for learning activities are designed to:

...build on prior knowledge.

...move from concrete to abstract thinking.

...ensure everyone works with everyone else.

...extend social language into curriculum language.

...provide motivating ways to go over the same topic more than once.

COLLABORATIVE LEARNING PROJECT

Project Director: Stuart Scott

We support a network of teaching professionals to develop and disseminate accessible talk-for-learning activities in all subject areas and for all ages.

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BRIEF SUMMARY OF BASIC PRINCIPLES BEHIND OUR TEACHING ACTIVITIES:

The project is a teacher network, and a non-profit making educational trust. Our main aim is to develop and disseminate classroom tested examples of effective group strategies that promote talk across all phases and subjects. We hope they will inspire you to develop and use similar strategies in other topics and curriculum areas. We want to encourage you to change them and adapt them to your classroom and students. We run teacher workshops and conferences worldwide but mainly in the UK. The project posts online many activities in all subject areas. An online newsletter is also updated regularly.

*These activities are influenced by current thinking about the role of language in learning. They are designed to help children learn through talk and active learning in small groups. They work best in non selective classes where children in need of language or learning support are integrated. They are well suited for the development of speaking and listening. They provide teachers ideal opportunities for assessment of spoken language.

*They provide scaffolding for differentiation by placing a high value on what children can offer to each other on a particular topic, and also give children the chance to respect each other's views and formulate shared opinions which they can disseminate to peers. By helping them to take ideas and abstract concepts, discuss, paraphrase and move them about physically, they help to develop thinking skills. We strongly endorse the principles of the Learning Without Limits group to which we belong.

*They give children the opportunity to participate in their own words and language in their own time without pressure. Many activities can be tried out in pupils' first languages and afterwards in English. A growing number of activities are available in more than one language, not translated, but mixed, so that you may need more than one language to complete the activity.

*They encourage study skills in context, and should therefore be used with a range of appropriate information books which are preferably within reach in the classroom.

*They are generally work effectively over a wide age range because children can bring their own knowledge to an activity and refer to books at an appropriate level. The activities work like catalysts.

*All project activities were planned and developed by teachers working together, and the main reason they are disseminated is to encourage teachers to work with each other inside and outside the classroom. They have made it possible for mainstream and language and learning support teachers to share an equal role in curriculum delivery. They should be adapted to local conditions. In order to help us keep pace with curriculum changes, please send any new or revised activities back to the project, so that we can add them to our lists of materials.

Friction

Friction is sometimes helpful and sometimes not helpful at all.

A lot of friction can sometimes be useful in our everyday lives, but at other times it can be a nuisance and not helpful at all. On the other hand, when friction is reduced, this can sometimes be very useful, but not always!

You have a set of cards with examples of times when there is a lot of friction about and times when there is not much. Sort them first into two groups:

A LOT OF FRICTION

FRICTION REDUCED

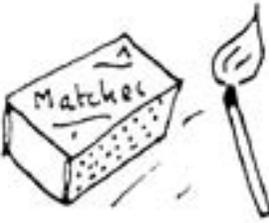
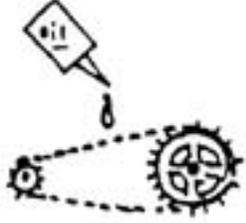
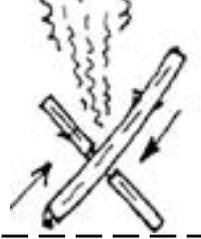
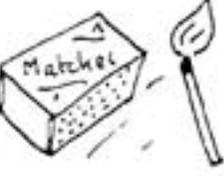
Now take the cards and fit them on the matrix. They should fit exactly.

Can you think of some more examples of friction making our lives easier or more difficult. You have a blank set of cards to fill in. Work together to make a different set of cards.

Remember! Friction tries to stop things from moving.

Friction

These examples cards (you or the children can add their own) should be printed on card and cut out.

 <p>striking a match</p>	 <p>a flat and punctured tyre</p>	 <p>oil on a bicycle chain</p>	 <p>skidding on a wet road</p>
 <p>the brakes on a bicycle</p>	 <p>a tight ring stuck on your finger</p>	 <p>using soap to remove a tight ring</p>	 <p>slipping on a banana skin</p>
 <p>trainers with rubber soles</p>	 <p>a rope rubbing on a sharp rock</p>	 <p>skiing down a slope</p>	 <p>slipping on the polished floor</p>
 <p>rubbing sticks to make a fire</p>	 <p>a stiff and rusty padlock</p>	 <p>roller skating</p>	 <p>a landslide of wet mud and rocks</p>
 <p>grooves on a screw top bottle</p>	 <p>no oil in a car engine</p>	 <p>sailing</p>	 <p>trying to catch a wet, muddy ball</p>

Friction.

Work together to sort the cards into the correct groups.

Useful

A lot of friction
Not useful

Useful

Not much friction.
Not useful

Friction.

These blank cards are for your own examples.

A lot of friction

Not much friction.

Useful

Not useful

Useful

Not useful
