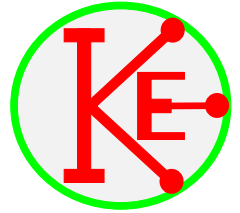


22 Balance2



EQUIPMENT

- Metre rule, wooden stick
- Bird and cat template
- Cardboard (cereal packet)
- Glue
- Colouring pencils
- 1p coins
- Scissors
- Sellotape
- Balancing demonstrations.

RISKS

Cuts from scissors

Paper cuts

SESSION

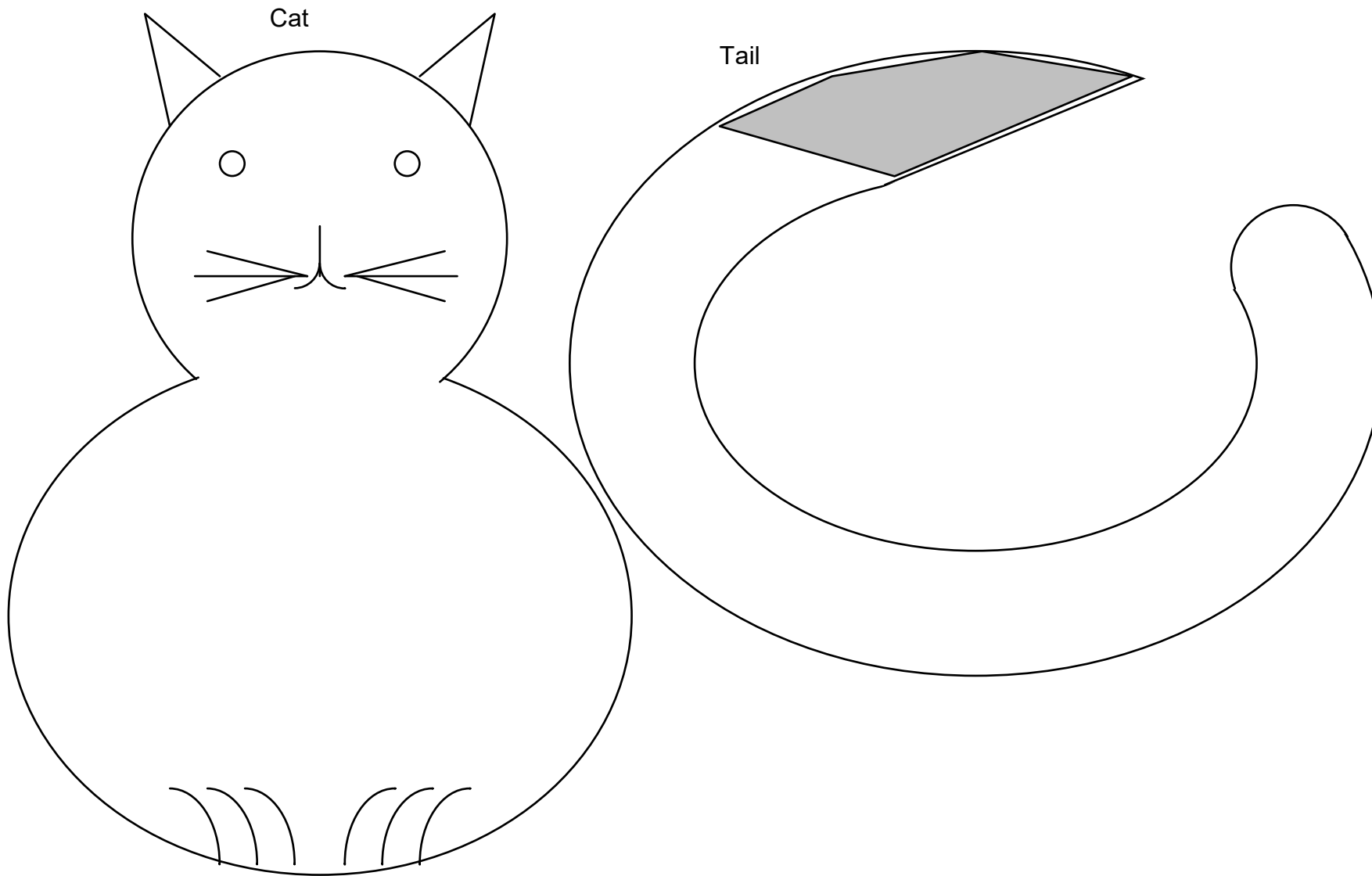
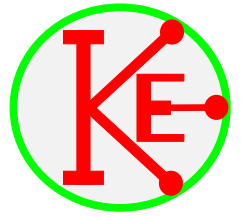
- 1). Discuss weight - what it is and what causes it.
Consider a metre rule - every section has weight.
Point where rule can be supported - Centre of Gravity (CoG).
Relate to see-saw (Principle of Moments)
- 2). Discuss position of centre of gravity on a rule by adding Blu-tac.
- 3). Discuss position of CoG with relation to the support.
Use rule on finger and then support beneath finger on string loop.
Show one is unconditionally stable and the other is unstable.
- 4). Consider different balance arrangements:
 - hammer and ruler,
 - black cat
 - forks
 - wine bottle
- 5). Show cardboard bird and cat.
- 6). Students use templates for cat and bird to produce their own.

Construction details for balancing toys at:-

http://www.ikes.16mb.com/physproj/balancing_toys.pdf

TEMPLATES

Cardboard Balancing Cat



Cardboard Balancing Bird

