

Active Dragons (Working document)

Physical activities using Dragonistic data cards

This is a working document

These are ideas for activities for a wide range of ages. Some of the details will need refinement and there will be adaptations needed for different groups of children. We would love to hear from teachers telling us how they went, with suggestions for improvements, and new ideas. Email n.petty@statslc.com

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Reason for these activities

We can use Dragonistics data cards to have fun activities where the children move, communicate and practise maths skills and concepts.

Care of the cards

When children are holding onto one card while running around, the cards tend to get battered. You can put them in little ziplock bags, or just have a set of 30 cards that are used for this purpose and kept separate from the rest of the set. As there are 240 Dragonistics data cards, there are a few to spare.

Age level

These activities can be used for a wide range of ages. We suggest ages 5-12.

Student agency and creativity

Once you have played physical games with the Dragonistics dragons, get the students to invent their own games and teach them to the rest of the class.

General Principles

- Each child has one Dragonistics data card, which then designates their actions for the game.
- The nine attributes for each dragon provide multiple ways for children to order and group themselves.
- Many of the activities or tasks that can be done by one child with 15 - 30 cards can also be performed by 15 -30 children with one card each.
- Activities can be co-operative where the whole class tries to perform a task or competitive with teams of students racing to perform tasks.
- Each time the class does an activity, children will have different cards assigned, so the activity becomes fresh.
- The process of playing is more important than the product!

Game One: Dragon Herding (sorting/ordering)

Each child has one Dragon card. The teacher uses all or some of the Attribute cards: Gender, Colour, Age, Age Century, Height, Behaviour, Strength, Breath, Name Order and Horns.

The children stand in a large area inside or out. A netball court is ideal. Designate one end as green and the other as red. Designate one side as male and one as female. The first few rounds will be a bit chaotic, but they will get the idea soon enough. You can choose to make them do it without talking for an extra challenge.

Teacher: Draw an Attribute card and call it out. Or just call out an attribute as you think of it or follow the sequence given later.

The following table tells what the children need to do:

Type	Attribute	Action for children	Follow up/notes
Category	Colour	Run to the appropriate end as previously designated	Check with neighbours that they are correct
Category	Gender	Run to the appropriate end/side as previously designated	Check
Category	Behaviour	Form into three groups according to behaviour.	Children could act out the behaviour as they find each other.
Category	Breath	Form into four groups for Fire, Acid, Ice and nothing.	
Number	Age	Line up in order from youngest dragon to oldest	This can be difficult for younger children.
Number	Height	Line up in order of height.	As there are several at each height, you may wish to show them how to do it in columns like a bar chart.
Number	Strength	As for Height	
Number	Horns	Group according to zero, one or two horns	Can be tricky to see on the card.
Ordered (like number)	Name order	Line up in alphabetical order	This can be difficult for younger children.
Number	Age Century	As for Height	This can be difficult for younger children.

Possible calling sequence to start with (going down the columns):

Colour	Strength	Gender
Gender	Behaviour	Age century
Behaviour	Age	Colour
Breath	Horns	Colour and Strength
Colour	Colour	Gender
Height	Name order	Horns
Gender	Behaviour	Gender and Height

Dragon Herding Variations and Extensions

1. To be done in silence, with or without showing cards to each other.
2. Every few turns, get children to swap dragons.
3. Two factors: Call out one of the categories, such as colour, and one of the Number attributes, such as Height. The children will need to go to the appropriate end and then form up according to the number attribute.
4. Two teams and compete for speed or accuracy. (Only suitable for older children)
5. Children count the number of dragons in their group and sit down as soon as they are sure.
6. Practise Odd and Even. Designate one area as Odd and the other as Even. Call out a number attribute and Odd/Even. Children decide whether their age, height or strength is odd or even and run to the appropriate area.

Game 2: Pairs of Dragons (same/different) - rich task starter

Each child has one Dragonistics dragon card.

Children line up on the edges of the playing area – maybe on the lines of a section of netball court.

1. Draw and call out an attribute (like in the game Dragon Formations). Then call same or different.
2. Children run to form a pair with someone with a dragon the same (or different) according to the attribute called, then sit down together.
3. When all possible paired, count how many unpaired. Maybe discuss as described below.
4. Children go back to the lines.

Repeat from 1.

Details

For example if "Colour, Same" is called, then pairs need to be Green Dragons and Red Dragons. If "Breath, Same" is called the pairs will be Fire, Acid, Ice or nothing. "Behaviour, Different" means the pairs will have different behaviours. You cannot use "Age" but can use "Age Century", which matches up the hundreds digit.

Discussion, possible rich task

There will be unpaired dragons for many of the attributes. You could discuss why this is the case. Which attributes will have more unpaired? Do you get more unpaired for same or different? You could work out all the possible things to call and record the unpaired each time. This could lead to a group rich task where each group has a set of 24 dragons and records the number unpaired. They could work out a recording system or use the following:

Minimum number of unpaired dragons:

Attribute	Same	Different
Colour		
Gender		
Behaviour		
Breath		
Horns		
Strength		
Height		
Age Century		

They can compare with other groups.

Game 3: Find the Gap (subtraction)

Each child has a Dragon card. Teacher calls out a numerical value, and a number. For example she might call "Height, 1". Each child then tries to find another child with a dragon whose height is one different from theirs. When they are successful they sit down in their pairs. Count how many children not paired after a certain time. As a class see if they can reduce the number of non-paired.

Teacher can check by getting each child to call out their value (Height in this instance). Examples of what to call out are:

Cards for Find the Gap

Height: the same (zero difference)	Strength: the same (zero difference)	Age: Same century
Height: difference of 1 metre	Strength: difference of 1 shield	Age: More than 100 years different
Height: difference of 2 metres	Strength: difference of 2 shields	Age: Same last digit
Height: difference of 3 metres	Strength: difference of 2 shields	Age: More than 200 years different
Total height and strength: the same	Name: same number of letters	Age: Less than 100 years different