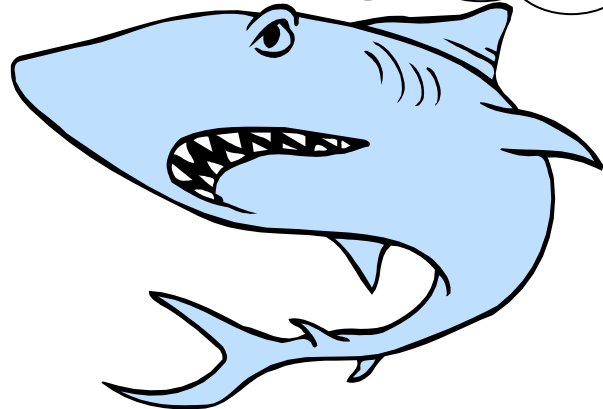# Pi Day Activities: Duck, Duck, Goose, Shark

> You run the circumference and I'll run the diameter three times!

This is not a contact sport!

This is a variation of that favourite childhood game. The addition of the role of the shark allows students to recognize that three times the diameter of the circle is approximately equal to the circumference of the circle, since three is an approximation for π.

- A group of players sit in a circle, facing inward, while another player, the 'picker[1]' (a.k.a. the 'fox'), walks around tapping or pointing to each player in turn, calling each a 'duck' until finally picking one to be a 'goose' .
- Traditionally, the 'goose' then rises and chases and tries to tag the 'picker', while the 'picker' tries to return to and sit where the 'goose' had been sitting.
- The Pi Day twist is that when the 'goose' rises he/she must look across the diameter of the circle and call out the 'shark'.
- The 'goose' and the 'picker' race in opposite directions around the circumference of the circle.
- The 'shark' must race across the diameter of the circle 3 times. Each time the 'shark' makes it across the diameter of the circle they touch the ground.
- There are now two empty spots and three players racing for them.
- The 'goose' and the 'picker' must each run the complete circumference before the one who did not make it back to the first empty spot can try to beat the 'shark' back to final empty spot.
- Whoever, is left standing without a spot, whether it is the 'picker', the 'goose' or the 'shark', becomes the 'picker' and the game begins again.

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[1] The role of picker is not to be confused with nosepicker as that sort of activity would never be endorsed by the author of this game.