

# 'Hidden Figures' movie lesson

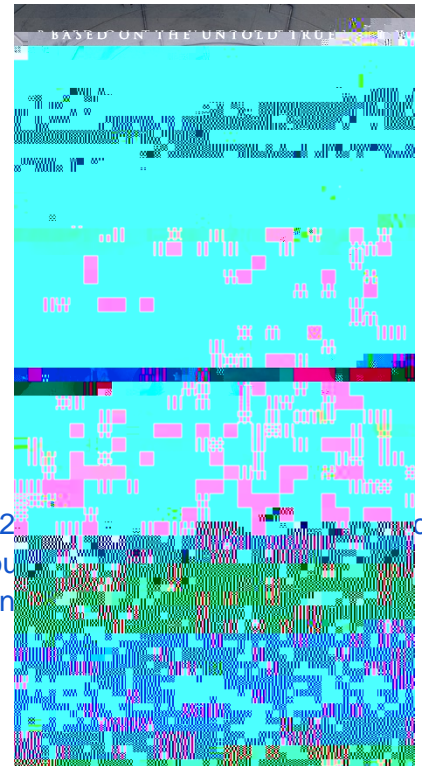
## Overview

In this lesson, students discuss *Hidden Figures* and what it might have meant that Katherine Johnson had to “make new mathematics” where “there is no formula”. They then play a game about communicating mathematical ideas across barriers that may force them to “see beyond the numbers” and come up with new mathematics. Finally, they reflect on their experiences dealing with mathematical frustrations, and the ways that Katherine Johnson’s experiences as a ‘black’ woman might have helped prepare her to be a pioneer in her field.

## Lesson Resources Needed

*Hidden Figures* trailers: <http://www.foxmovies.com/movies/hidden-figures>

at NASA: how to communicate with the astronauts in space when some part of you failed, and you need them to understand the geometry or rocket trajectory to return.



## Mission Control Games

(Originally published in *Powerful Problem Solving*, Heinemann 2013)

### Geometry Version

**Format** .....Students working in pairs or groups of four.

**Materials** .....Folders or books to serve as dividers, pattern blocks or tangrams.





Ask students to connect their experiences with this game to other aspects of their lives: have they had to use communication skills like this before? Cope with frustrations? How did their previous experiences help them have success today?

Connect this back to Katherine Johnson by asking, "How might the women in *Hidden Figures* have drawn on their life experiences to help them make mathematical and engineering and computing breakthroughs?"

Students might consider:

They knew how to cope with frustration and set-backs.

They knew how to look at problems (computers taking over their jobs, Russia winning the space race, not knowing a formula) as opportunities (the computers will 01 to 1.77 (us7 (

<http://www.nctm.org/Publications/Mathematics-Teaching-in-Middle->