



Educator Content Series: Productive Struggle

November 2020 |

Introduce yourself in chat.
Please type your name and
your role in mathematics
education.

Agenda & Outcomes

Defining Productive Struggle

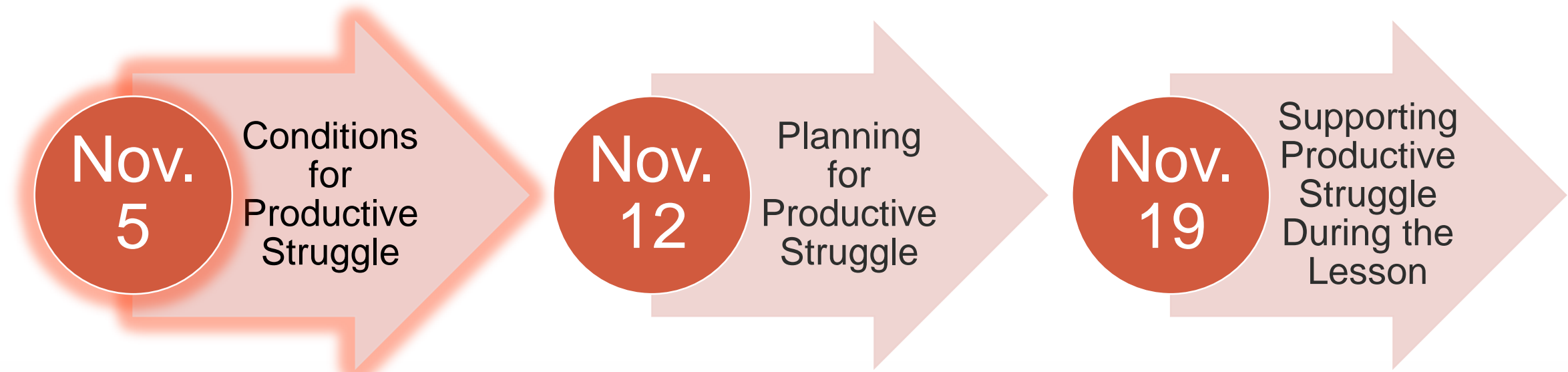
Research & Recommendations

Classroom Examples

Reflection & Action

1. Share instructional strategies that support productive struggle
2. Facilitate networking and resource sharing between educators
3. Provide space to discuss challenges and potential solutions.

Series Overview



Establish a *consistent*,
organized, and *respectful*
learning environment.
(HLP 7)



Research & Recommendations

*What classroom conditions are
needed to build a community
for productive struggle ?*

1. Establish norms for behavior and interaction

Positive math communities are necessary to advance student learning.

What are teachers doing?	What are students doing?
<ul style="list-style-type: none">• Co-creating norms<ul style="list-style-type: none">• What to do when stuck• Respecting ideas/Sharing thinking• Making mistakes• Offering consistent reminders and reinforcing norms• Celebrating effort and struggle	<ul style="list-style-type: none">• Creating individual or class posters• Engaging in discussion around expectations• Reflecting and celebrating effort and struggle

2. Acceptance, belonging and support

Everyone has a responsibility and an obligation to make sense of mathematics.

What are teachers doing?	What are students doing?
<ul style="list-style-type: none">• Planning connections between content and students personal interests, values• Facilitating identity activities<ul style="list-style-type: none">• Dimensions of Me• Struggle emojis	<ul style="list-style-type: none">• Helping/respecting one another• Participating and sharing ideas• Making connections

3. Common understanding of the value of struggle

Struggle is a part of being a successful learner of mathematics.

What are teachers doing?

- Designating time to create a class definition of struggle.
- Explicitly teach about growth mindset.

What are students doing?

- Using anchor charts as a reminder
- Struggle pictures/comics
 - Identify benefits of struggle inside/outside the classroom.





Classroom Examples

*How might this look in a
secondary math classroom?*

Establishing Norms with Google Jamboard




- Mix up the sticky notes
- Have students sort and discuss.
- Add to the chart using their past experiences.

Acceptance, Belonging & Support in Algebra 2

Identity Check #PowerOfAVoice

5



What is black freedom?

Wale & Nick Young talk discrimination in America | The BET Experience

Kearney_Distance Learning SY19-20

teams.microsoft.com is sharing your screen. Stop sharing Hide

- Polling to allow students to share ideas
- Connections to personal interests
 - Wale & Nick Young
 - Young millionaires