The Pinwheel: A Classroom Design for Boosting Social Learning

During this event, Peter will:

- Introduce and describe the rationale for using the "pinwheel" structure
- demonstrate a lesson using the pinwheel approach
- provide an activity which maximizes students' talk-time while rotating contact and ideas among classmates

AE AMERICAN ENGLISH

Peter Edwards

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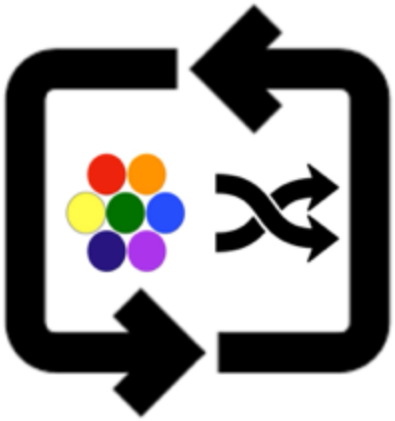
His career began in Poland, but he has spent the past 24 years teaching and researching in East Asia. Study Abroad and Neurodidactics hold some of Peter's current focus.

He is a founding associate with Academics Supporting Korogocho (ASK), building school programs in Nairobi, Kenya. He recently consulted in Cali, Colombia, as an English Specialist, and currently advises a graduate program at Mount Kenya University in Kigali, Rwanda. His next position is at a university in Saudi Arabia.



The Pinwheel

A Classroom Structure for Simulating Authentic Intergroup Contact

Peter A. Edwards, PhD

The Contact Hypothesis

- The Pinwheel is based Gordon Allport's (1954) Contact Hypothesis conditions:
  - Equal status
  - Common goals
  - Cooperation
  - Authority support
  - Friendship potential

Today's OBJECTIVES

- Define the Pinwheel as a **framework** to mix groups for more **contact learning** among students and provide more individual spotlight **talk-time**

- Show ways to **divide** and **prioritize** topic to get more **utility and originality** from it

Discussion Question 1

How content are we to have just the top students answer questions?

Discussion Question 2

How much do our students care about school subjects compared with school friendships?

Sid's Story:
The contact that sparked my career

S.O.A.P.

- ***S***tudents'
- ***O***riginal
- ***A***bundant
- ***P***roduction

Humans are social animals!

A.I.R.

- ***A***ttracting
- ***I***ntergroup
- ***R***espect

A.I.R.

- ***A***ttracting
- ***I***ntergroup
- ***Re***spect

Is your classroom "bubbly"?
(Bubbles come from *soap & air.)*

- HOW SOAPy is the quieter half of your class?
  - Original = not read, parroted, or memorized
  - Abundant = 7+ minutes of 7+ word utterances
- HOW AIRy is your whole class?
  - Flexible enough to mingle among groups
  - Intergroup—among class cliques and strangers

The Pinwheel makes BUBBLES!

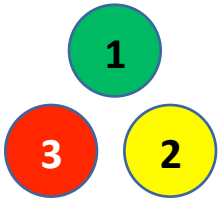
The Pinwheel is a 7-step framework with two main functions…

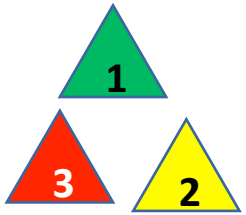
1. Divide and mix student groups!
2. Divide and mix parts of any topic!

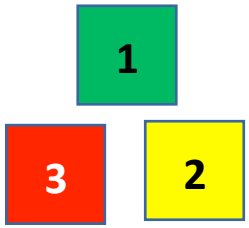
The seven steps of the Pinwheel!

1. MAKE GROUPS
2. ASSIGN NUMBERS
3. SPOTLIGHT
4. DISCUSS
5. SWITCH
6. DIVIDE
7. RANK

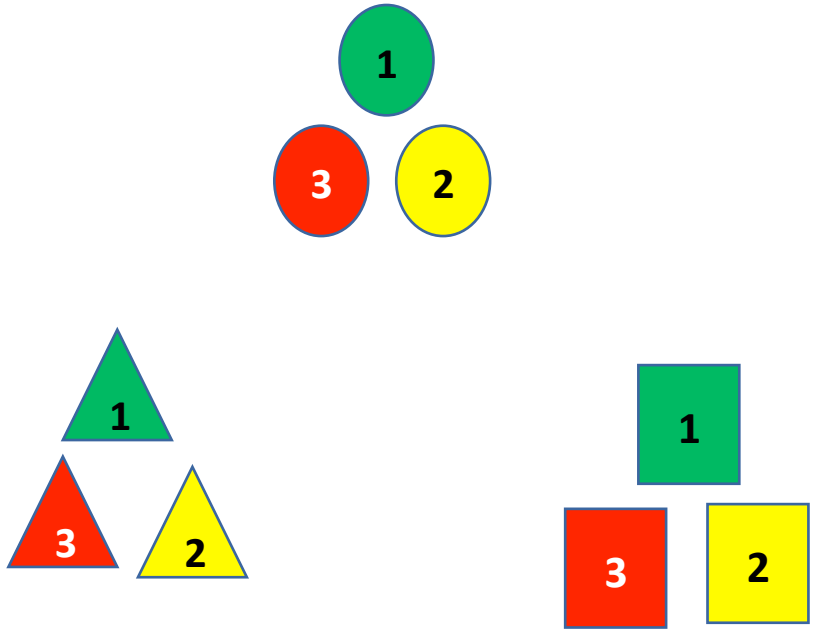
Show Pinwheel Video





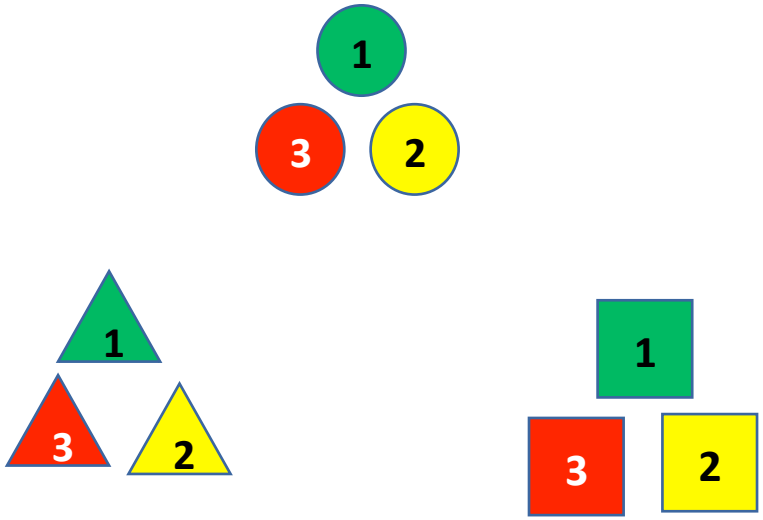


1. GROUPS!



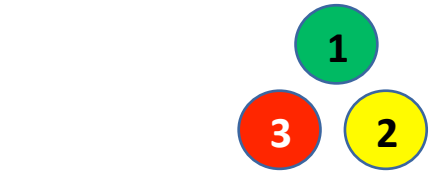
- Three students in each group
- Organize Groups into a classroom circle with empty space in the middle

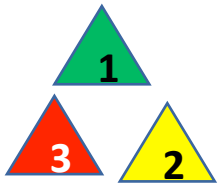
2. NUMBERS!

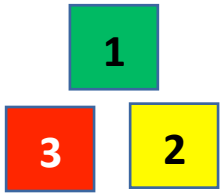


- Number students within each group: 1, 2, and 3
- Students keep this same number for the entire class day

3. SPOTLIGHT TIME!

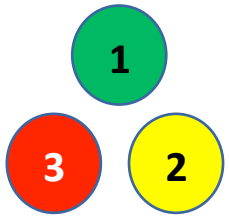


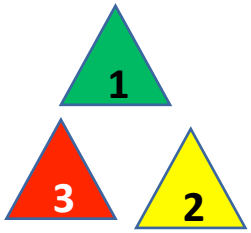


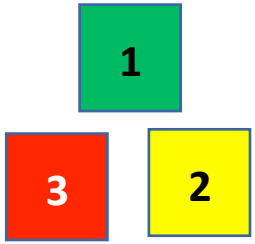


- Call on student #1 to stand and speak for an exact chosen time on a chosen topic (opinion, homework, etc).
- Speakers may not stall, finish early, or go beyond the time limit.
- Other group members listen attentively but silently. Listeners clap briefly when speaker finishes and sits.
- Repeat for students #2 and #3.

4. DISCUSS!

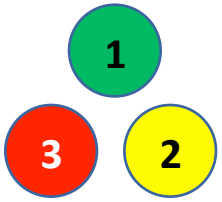


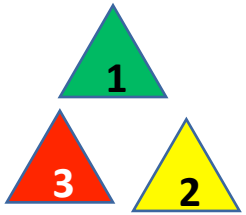


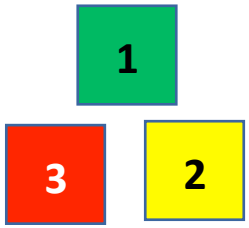


- After all members do the spotlight activity, students discuss more freely.
- Topics can be further explored with questions to speakers or teacher.
- Teacher can point out language or topic issues.

5. SWITCH GROUPS! (1)

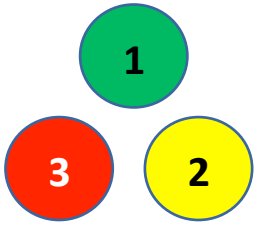


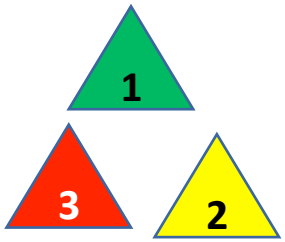


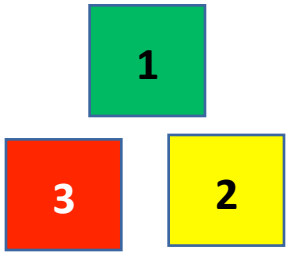


- All #1s change to new groups by rotating clockwise. #2s rotate counterclockwise. HINT: reduce confusion by having students point to their next group *before* they move!
- Repeat *spotlight* and *discussion time* with these new groups. Alternate speaker order.

5. SWITCH GROUPS! (2)



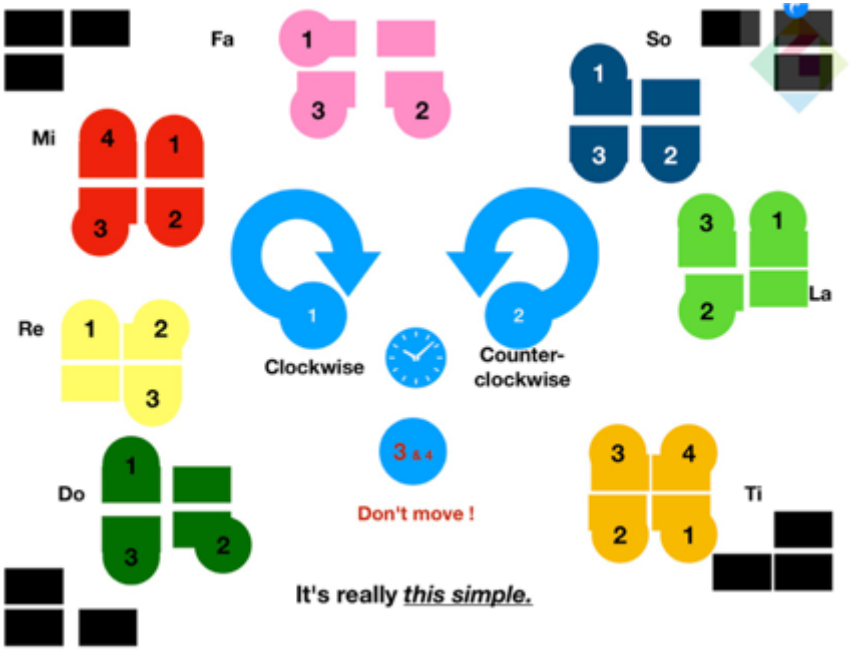


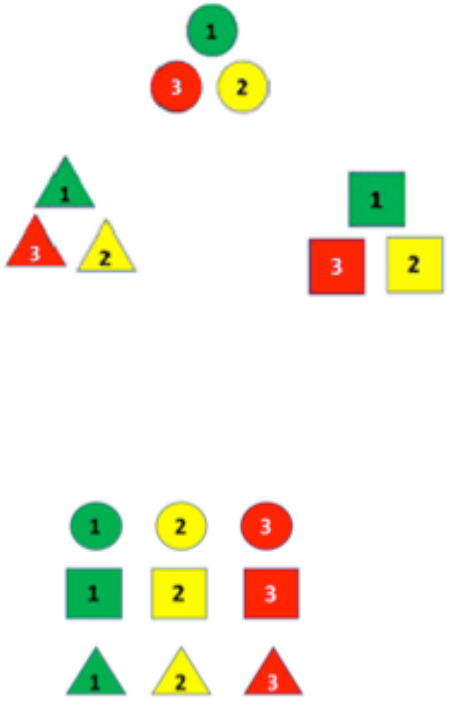


- Switch groups as needed for language and idea development.
- Return to original “home” group. Exchange how ideas have developed since students left the home group.

The basic pinwheel framework can be used with any number of students…

Pinwheel with 23





Pinwheel Lesson

The Pinwheel also works with fixed desks, like in lecture halls and computer rooms….

Pinwheel Computer Lab

Let's now look at Part Two: the last steps of the Pinwheel…

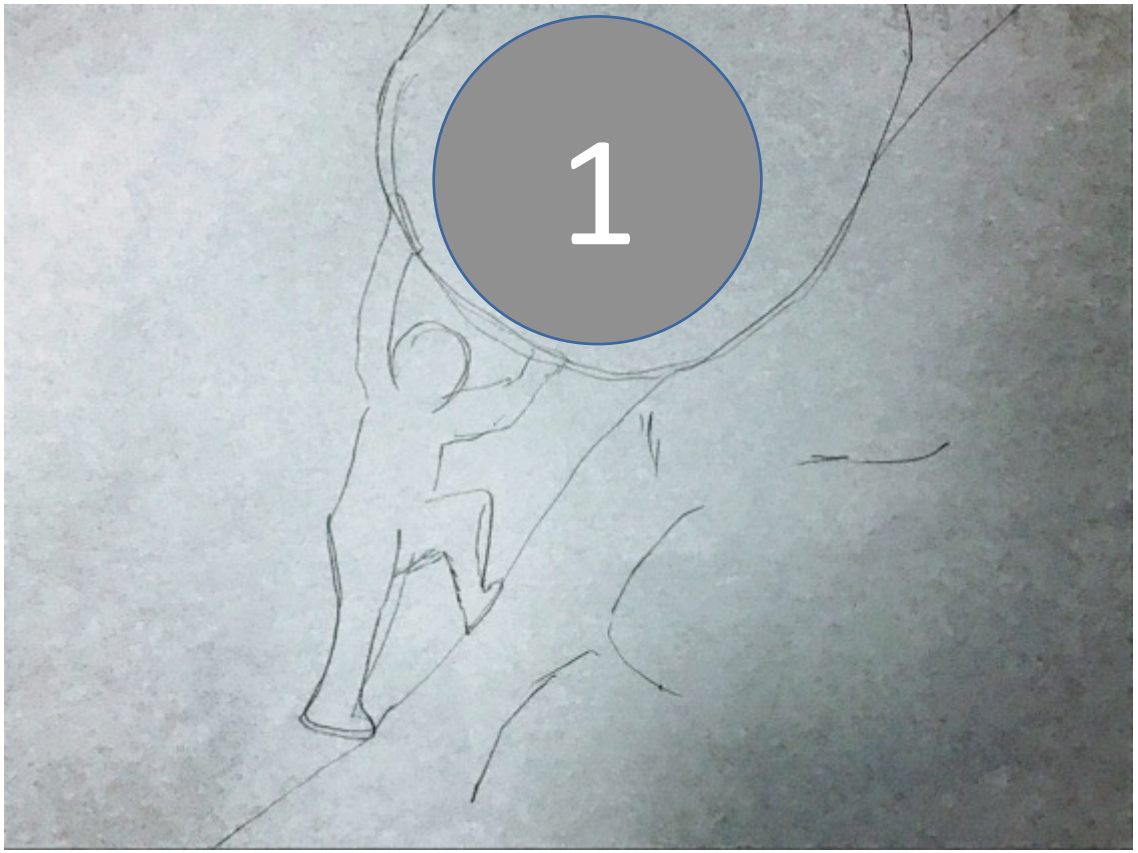
We can already do the first five steps:

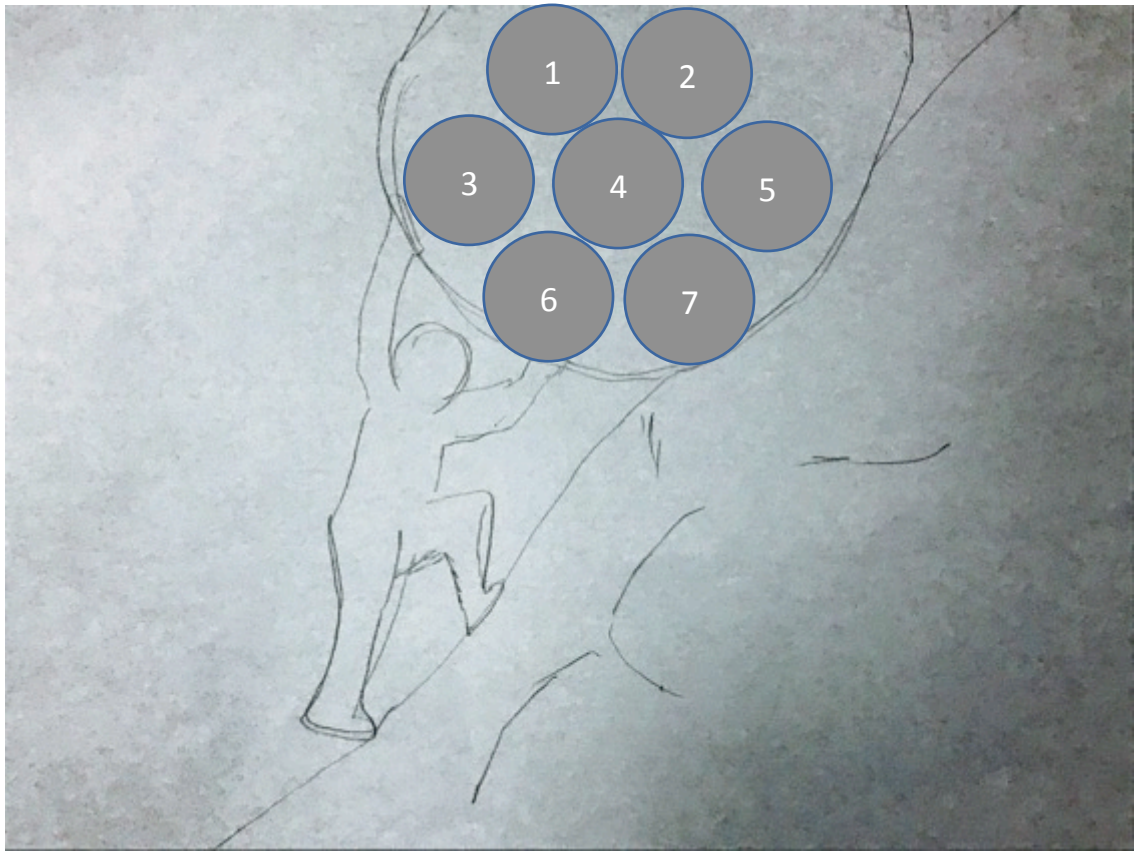
GROUPS—NUMBERS—SPOTLIGHT—DISCUSS—SWITCH!

Part Two: Dividing Topics

- Topics such as “learning English” or “pets” may be too big for students.
- They might not know where to start talking or how to say something original.
- But! We as teachers can help by dividing topics into parts that students can more easily and uniquely combine!

Cut up BIG TOPICS!

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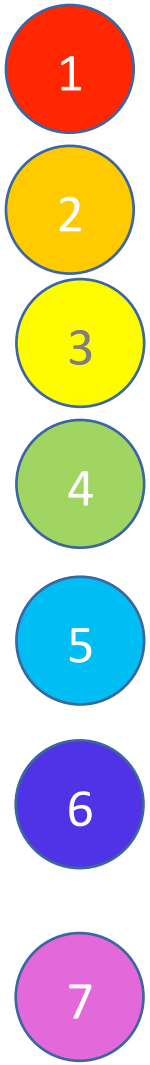
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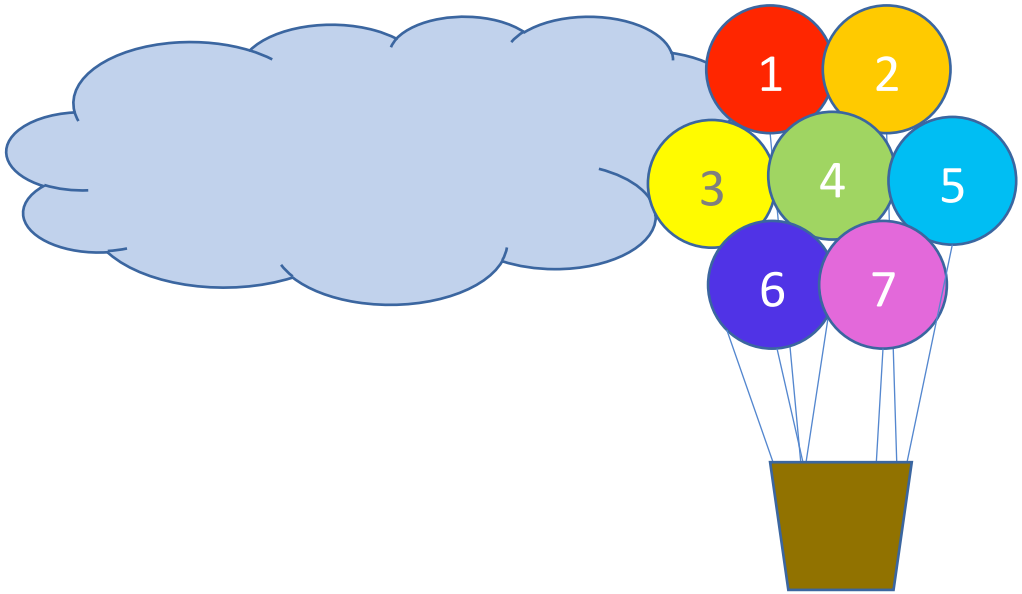
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Now… 6

- DIVIDE TOPIC into PARTS!
  - Teacher (or students) selects *seven* parts, types, elements, etc. of one topic
    - Example: "7 factors for **language learning**" or "7 popular **pets**"
  - The number **seven** has several advantages:
    - It allows for variety and creativity without being overwhelming
    - It's a common number of divisions: rainbows, musical notes, etc.
    - Everyone divides and organizes their weeks into seven days!

And…. 7!

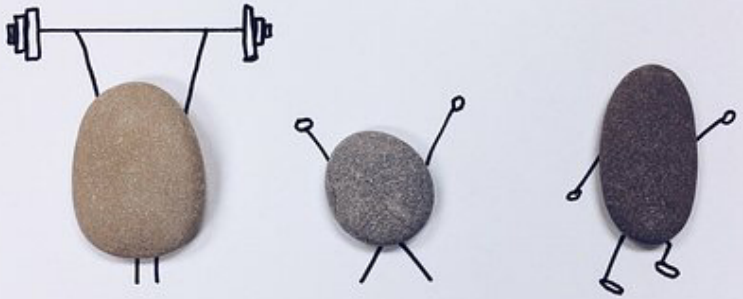
- RANK TOPIC PARTS into HIGH, MIDDLE, and LOW levels
  - Students place the seven parts into three levels (2/3/2)
    - Example: importance, favor, etc.
  - This reduces the complexity. Students can discuss one or two parts
    - *What is one high-level factor, and one lower-level factor for language learning?*
    - *What kind of animal would you most/least want to have?*

Let’s divide the topic of language learning into seven possibly helpful factors.

1. Support at home
2. Prior L2 success
3. Classroom environment
4. Teacher’s faith in students success
5. Personality
6. Age
7. Comfort speaking L2 around L1 users

Let's all choose two… the *most and least* important in our opinion

- This is similar to our body's **fitness!**
- Imagine you want to play your favorite sport better
- Which fitness factors would be *most* and *least* important?
  - Strength?
  - Flexibility?
  - Endurance?



  - Now try with the seven language learning factors!

Let’s divide the topic of language learning into seven possibly helpful factors.

1. Support at home
2. Prior L2 success
3. Classroom environment
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6. Age
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How would one student experience a Pinwheel class?

- Let's take the topic of ***pets.***
- Our class had the homework of ranking seven pets into three levels.
- Let's look at just some of how we can use the Pinwheel…

Meet Doris…

Doris really likes cats.

She never thought about other animals as pets.

In today's class she meets classmates with different opinions.

Divide topics into seven parts.

PETS







TOPIC BOOKSHELF

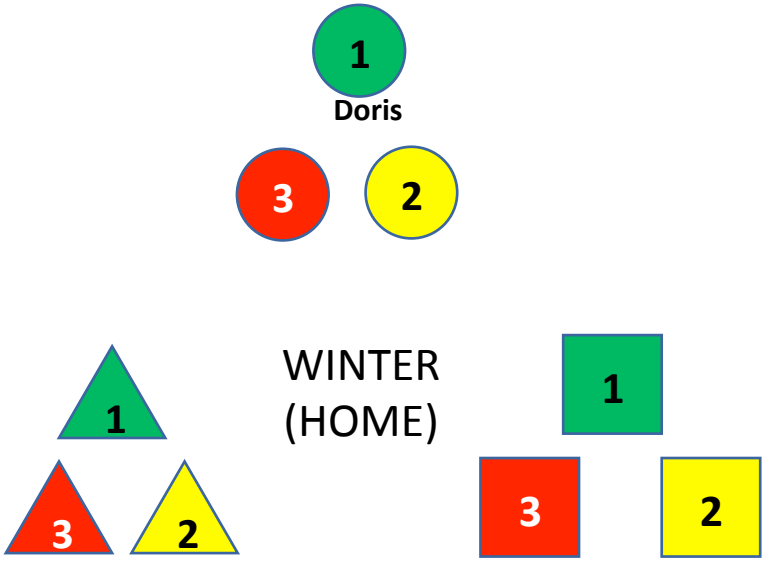
High

Middle

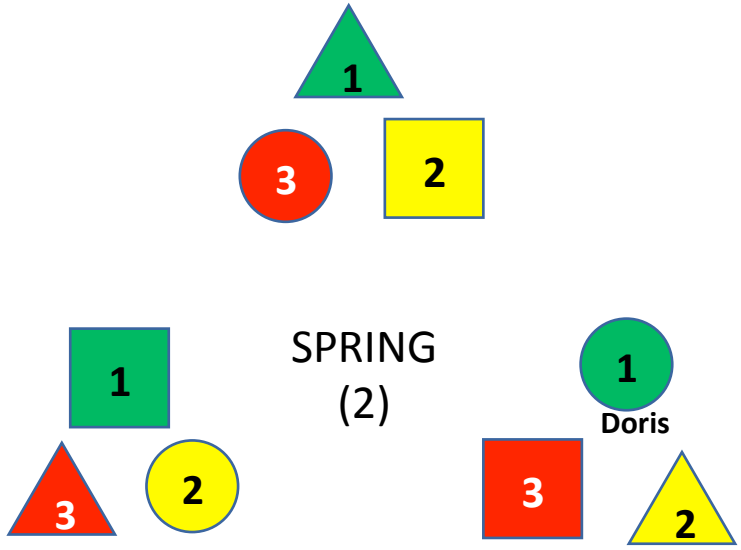
Low

Imagine Doris going through one cycle, four seasons, of the Pinwheel...

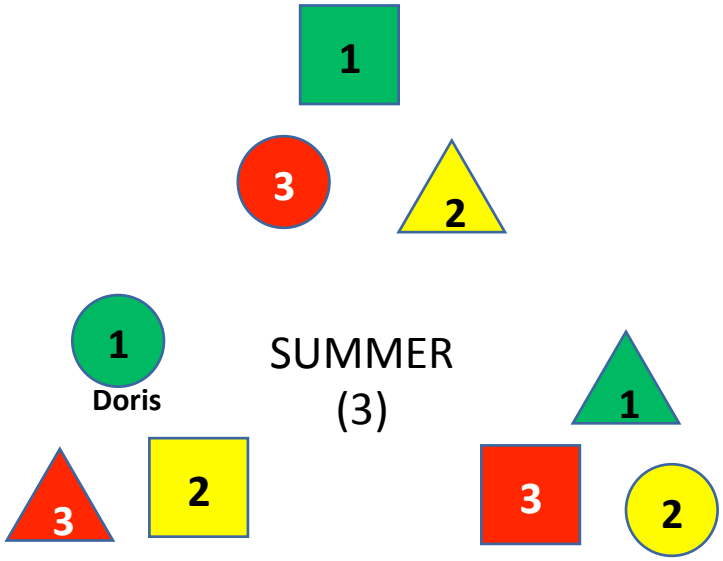
- Doris will have contact with six other students.
- Each of the other students has different opinions about pets.
- Doris listens carefully to what and how her classmates speak.
- Through the Pinwheel, Doris's opinions about pets change!



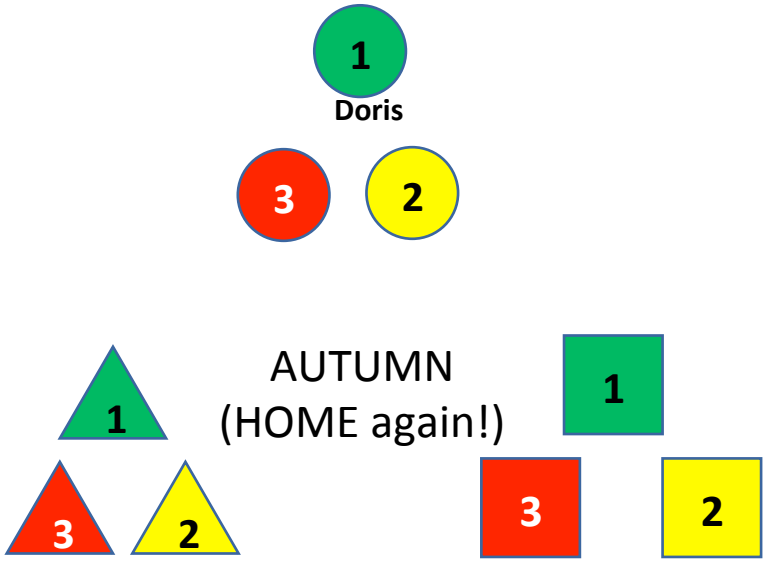
	Order	Score from Doris	HIGH	HIGH	MIDDLE	MIDDLE	MIDDLE	LOW	LOW
	1 Doris								
WINTER	2	✔ –							
	3	✔							

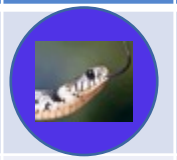
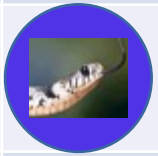
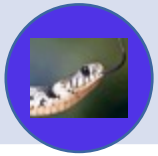


	Order	Score from Doris	HIGH	HIGH	MIDDLE	MIDDLE	MIDDLE	LOW	LOW
	2	✔+							
SPRING	3	✔							
	1 Doris								

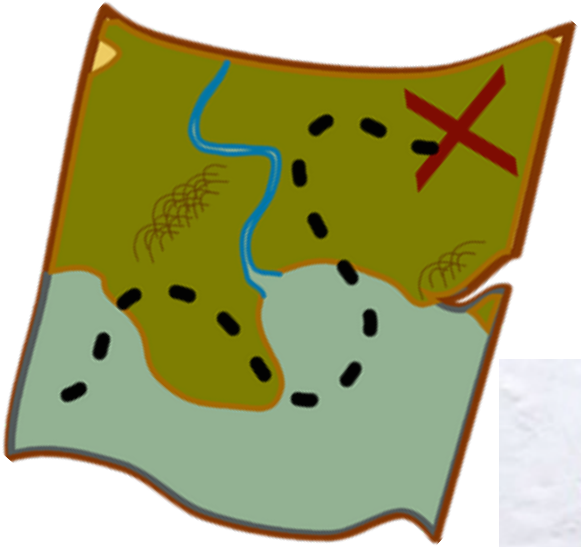


	Order	Score from Doris	HIGH	HIGH	MIDDLE	MIDDLE	MIDDLE	LOW	LOW
	3	✔							
SUMMER	1 Doris								
	2	✔ –							



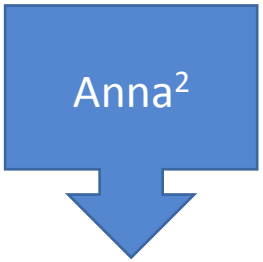
	Order	Score from Doris	HIGH	HIGH	MIDDLE	MIDDLE	MIDDLE	LOW	LOW
	1 Doris								
AUTUMN	2	✔+							
	3	✔							

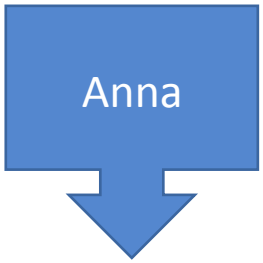
Let’s look over Doris’s Pinwheel journey…

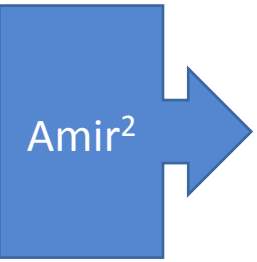


Doris's **final** thoughts.
Cats are complex.
Snakes are not crazy pets

Doris's **first** thoughts.
Cats are cute.
Snakes are scary.

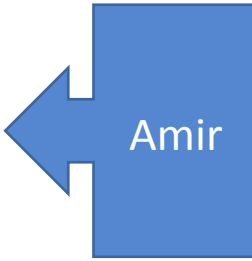


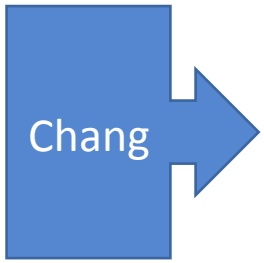




Doris's *autumn* thoughts
Cats are funny.
Snakes are easy.

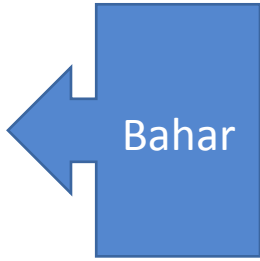
Doris's *winter* thoughts
Cats scratch furniture.
Snakes are not slimy.

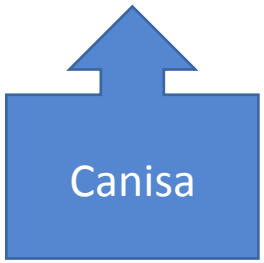


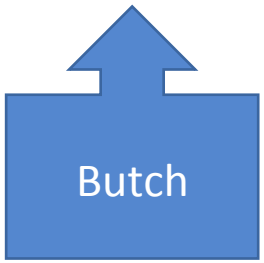


Doris's **summer** thoughts
Cats play often.
Snakes are unusual topics.

Doris's *spring* thoughts
Cats hate new pets.
Snakes eat once a week.



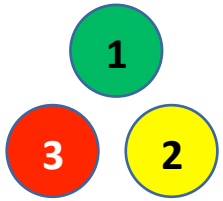


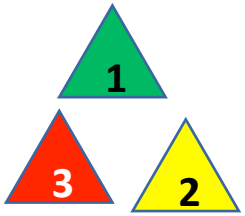


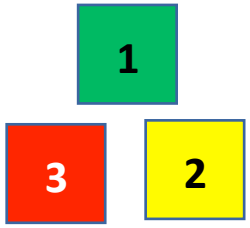
Remember!

The basic structure of the Pinwheel is very simple, but it can be used in many ways to…

- increase contact and talk-time
- to get more out of any topic







Yuka's Sketch: What ideas from our presentation today do you see here?

Seven References

1. Allport, G. W. (1954). The nature of prejudice.
2. Schultz, K. (2011). Being wrong: Adventures in the margin of error.
3. Lieberman, M. D. (2013). Social: Why our brains are wired to connect.
4. Christian, B., & Griffiths, T. (2016). Algorithms to live by: the computer science of human decisions.

Seven References (continued)

5. Willingham, D. T. (2009). Why don't students like school?: A cognitive scientist answers questions about how the mind works and what it means for the classroom.

6. Tokuhama-Espinosa, T. (2014). Making classrooms better: 50 practical applications of mind, brain, and education science.

7. Morgan, A., & Barden, M. (2015). A beautiful constraint: how to transform your limitations into advantages, and why it's everyone's business.