**Supplemental Materials**

**Promoting Prosocial Behavior and Self-Regulatory Skills in Preschool Children Through a Mindfulness-Based Kindness Curriculum**

**by L. Flook et al., 2014, *Developmental Psychology***

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**Lesson 1: Mindful Bodies; Awareness of Attention and Breath**

**Concepts**

* We can pay attention on the inside
* We can pay attention on the outside

**Key Words (A= Attention** card**)**

breath, attention, inside, outside

**Objective**

Children will be able to:

1. Pay attention on the outside (bell tone)
2. Pay attention on the inside (breath sensations)

**Materials**

Visual schedule board (VSB) with pictures (see visual schedule below), bell, container to hide bell, pin wheels, letters to parents about program and breath, A-Attention card

**Visual Schedule**

Circle time, surprise, surprise

**Activities**

1. Introduction to paying attention and breath
2. Surprise? Pinwheel- focus on feeling the breath on inside
3. Transition- drop pinwheels and letters to parents in cubbies
4. Surprise? Bell- paying attention on the outside

**Connection:** *Hi, my name is \_\_\_\_\_\_\_\_. I will meet with you two times each week. I feel excited on the inside to be here! Each day I will have a list of things that we will do… soon you will learn what each picture means. Today I have circle time, surprise, and surprise.* (Demonstrate the schedule board.)

**Teaching:** *Today we will learn a new word. “Mindfulness” Mindfulness means to pay attention in a special way. What does “pay attention” mean?* (Wait for responses.) *We can learn to pay attention on the inside and the outside of our bodies. When we pay attention, we use mindfulness and this can help us calm down if we are sad, angry or frustrated. It can also help us feel happy.* *.*  (Hold up **A=Attention** card and hang it up on the wall) *How can you tell this person is paying attention?* (Eyes forward, body calm, no talking). *When we pay attention, in a special way, sometimes our bodies automatically become still. Let’s say our new word, Mindfulness, 3x to help us remember it.* (“Mindfulness”)

*Now,* l*et’s pay attention to something I brought today…Are you ready? How do you feel on the inside waiting for a surprise?* (Accept answers) *What is this?* (Pinwheel) *How does it work?* (Blow it) *You are right… watching me, I will fill up my belly with air and then blow it out* (blow pin wheel). *I feel my belly and chest stretch on the inside when I breathe in and squeeze when I breathe out.*

**Active engagement:** *Now it is your turn to practice feeling your breath. Put one hand on your belly, take a big breath so your belly gets bigger and then pretend the back of your other hand is pin wheel and feel your belly get smaller.* (Demonstrate) *Great!* *Raise your hand if you want to share where you felt your breath.* (Call on several students) *Now it’s time to blow the pinwheels.* (Pass them out) *Feel your belly fill with air … then blow your pinwheel.* (After several attempts, check-in to see what they noticed about the breath- easy or powerful breath).

*These pinwheels are for you to take home. Please put them in your cubbies and then come to sit on the rug so I can show you one more surprise today.* (Let kids put away pinwheels and two letters to parents)

*I brought another surprise… what do you think it is?* (Let students guess and ask…) *How does it feel to “not know” what I have? It’s a bell. It can help us pay attention on the outside. Put one hand in the air. I will invite the bell. When you don’t hear the sound of the bell anymore put your hand on your belly.* (Try it 2x). *Everyone was paying attention on the outside to the bell and on the inside to the breath.*

**Closing:** *Today we learned about paying attention, breath and inviting the bell. I will see you soon!*

**Theme Two: I Feel Emotions on the Inside**

**Lesson 6: Different Emotions Feel Differently on the Inside**

**Concepts:**

* I can tell someone how I feel on the inside
* I like some feelings and don’t like other feelings, but all feelings are helpful.

**Key Words (E=Emotions** card**)**

Snail/slow, bee/busy, basset dog/sad, lark/happy, tiger/brave, shrimp/shy

**Objective**

Children will be able to:

1. Reflect and comment on feelings in the body
2. Tell how feelings we like and don’t like are helpful

**Materials**

VSB, bell, belly buddies, Quick as a Cricket book

**Visual Schedule**

Bell, GFW, surprise? (Book), pretend, E= Emotion card, belly buddies, Betsy Rose CD (Rose, B. [2006]. *Calm down boogie: Songs for peaceful moments and lively spirits* [CD]. Albany, New York: A Gentle Wind.), CD player

**Activities**

1. Bell
2. GFW
3. Quick as a Cricket book
4. Pretend to be animals/reflect on feelings
5. Belly buddies with **Breathing In, Breathing Out** song

**Connection:** *It’s \_\_’s turn to invite the bell.* (Support as needed) *Let’s stand up and say our GFW and \_\_\_\_ will lead us. Thank you.* (Offer kindness seed.) (Comment on growing number of seeds in the Kindness Garden or encourage teacher & students to recognize recent kind act in classroom.)

**Teaching:** *Last time we talked about feeling quiet on the inside when walking and feeling or walking and listening even if it is noisy on the outside. We don’t always feel quiet on the inside. Today I brought a book that shows how some animals feel on the inside. Notice how YOU feel on the inside before we begin the book.* (Read Quick as a Cricket)

**Active engagement:** *Now it’s time for us to practice feeling on the inside and telling how we feel. First let’s practice being snails. What kind of movements do snails make? (Slow, slithery, etc.) When I invite the bell, start moving like a snail. When I invite the bell again, freeze. Ready?* (Invite bell) *Raise your hand to tell me how it feels inside to move your body like a snail.* *Where in your body do you feel it?*  (Continue on with Bee: excited/calm; Basset: sad/heavy/relaxed/busy; Lark: happy/light/scared flying; Tiger: brave/big/afraid; Shrimp: shy/small/ afraid.)

*Let’s do a feeling walk back to the rug, feel the bottom of your feet with each step. Then sit down crisscross applesauce and feel your bottom on the carpet.*

*We felt many emotions pretending to be animals*. (Hold up **E=Emotions** card and add it to the wall with other letters). *Raise your hand if you want to share with the class which animal you liked being best.* (Students share; check to see how many other students liked being that animal.) *Raise your hand if you want to share which animal you didn’t like being?*

*Even though we feel emotions we like and emotions we don’t like, all emotions are helpful. Why are emotions helpful?* (They keep us safe and help us know what we need)

**Closing:** *Let’s finish today resting into our quiet place on the inside. Before we lie down let’s stretch our arms and legs and then rest on the rug. When bodies are still and you can feel your breath, I will place a belly buddy on your belly as we listen to our* ***Breathing In, Breathing Out*** *song. Notice how you feel in your body and tell us as I collect the belly buddies. See you next time.*

**Theme Five: Calming and Working Out Problems**

**Lesson 14: Forgiving Myself**

**Concepts**

* We all have accidents
* We can forgive ourselves when we have an accident

**Key words (F= Forgive** card**)**

Accident, forgive, hug

**Objective**

Children will be able to:

1. Tell of a time they had an accident
2. Give themselves an “imaginary hug”

**Materials**

VSB, bell, movement pictures, Down the Road book, theme-relatedsong

**Visual Schedule**

Bell, GFW, movement, book, song, brain game

**Activities**

1. Bell, GFW, movement (giraffe and eagle)
2. Book review (Down the Road)
3. Discussion:

How do you feel when you have an accident?

1. Song (**accidents song**)
2. Brain game (“Imaginary hug”, playful-bear hug, ant hug…)
3. Bell

**Connection:** (Have next student on list invite bell and lead GFW.)

*Please stay standing. Yesterday we practiced animal movements. Sometimes when we are upset, if we move our bodies and breathe we can feel calmer. Let’s do giraffe and eagle today.*

**Teaching*:*** *Raise your hand if you remember this book.* *(*Hold up Down the Road.) *How did the girl feel when she had an accident?* (Call on students) *What did she do?* (Sat in a tree) *Did the girl’s parent stay mad at her for a long time?* (No) *They didn’t stay angry with her, they forgave her.* (Show **F=forgive** card and add it to wall.) *Forgiving helps us and the other person feel better. At school and at home we all have accidents. Can someone share about an accident that happened to them?* (Call on a student to share. Be sure to have a story ready about an accident that you have had or seen at school if the children cannot remember something that has happened to them.)

**Active engagement:** *We can probably all think of an accident that happened to us.*  *They happen to everyone.* *How do you feel when you have an accident?* *Raise your hand if you’d like to share how accidents make you feel*. (Bad, sad, embarrassed, etc.)

*I’m feeling excited to teach you a new song about accidents.* (Teach the song with hand motions.)

*Let’s remember to say, “I didn’t mean it, are you okay?” when we need to.*

*Sometimes when I have an accident I feel really sad or embarrassed. Then I like to give myself an “imaginary hug”. I close my eyes and feel a hug. Let’s try it*.  *Then I might give myself a real hug. Let’s stand up and try some hugs. Can you give yourself a great big bear hug* (model)? *Now a little tiny ant hug* (have fingers crawl up opposite arms to the shoulders). *Last, let’s try a patty cake hug* (pat arms up to shoulders).

**Closing:** *Let’s invite the bell to close our time together.* (Choose next student on list to invite the bell)

**Theme Seven: All People Depend on Each Other and the Earth**

**Lesson 19: People around the World Want Peace ^**

**Concepts**

* We are the same as others because we all want peace
* We are different from others because we speak different languages

 **Key Words**

 World, language, peace

**Objective**

Children will be able to:

1. Say one way they are the same and different from others
2. Name one thing that everyone wants: Peace

**Materials**

VSB, bell, book (Can You Say Peace), maps and stickers, **May You Be Happy** song, inflatable globe, parent letter # 3, Betsy Rose CD (Rose, B. [2006]. *Calm down boogie: Songs for peaceful moments and lively spirits* [CD]. Albany, New York: A Gentle Wind.), CD player

**Visual Schedule**

Bell, GFW, book, surprise ?, song, bell

**Activities**

1. Bell and GFW
2. Read Book
3. Surprise (map activity)
4. Song (**May You Be Happy**)
5. Bell

C**onnection:** (Have next student on list invite bell and lead GFW.)

**Teaching:** (Hold up the inflated globe.)  *Does anyone know what this is?* (World, earth, globe) *Yes, and this is where we live in the world* (point to state). *But there are children who live all around the world. Today we're going to talk about people we have never even met who live very far away. Just like we want peace and kindness in our classroom, people all around the world want peace and kindness. We will see where each of the children live and how they say “Peace” in their language.* (Read Can You Say Peace?)

*I brought pictures of kids who live in other places around the world. Some look the same as us and others look different from us.*

**Active Engagement:** (Hold up sticker sheet) *These are children who live in different places from us. We will put their pictures where they live on this* (Hold up the map). (See if children know the word ‘map’ or teach it) *The stickers and the map have small signs on them. We can know where to put the picture by matching the signs. Let’s start with the first picture. This child/these children live in \_\_\_\_\_\_\_\_* (tell the country - start with the U.S. and point it out on the map) *and we say the word “peace”.* (For each picture, have students describe what they see and teach them how to say “peace” in that country’s language)

  \* **U.S.= peace (English)   \* Mexico= paz (Spanish)
  \* Bolivia= mojjsa kamana (Aymara)  \* France= paix (French)
   \* Ghana=goom-jigi (Buli)   \* Iran= sohl (Farsi)
   \* Russian= mir (Russian)** pronounced “meer” **\* China= he ping   \* Japan= heiwa (Japanese)
   \* Australian= kurtuku (Warnmen)**

 *Now you know how to say “peace” in other languages.*
**Closing:**  *So, kids from other places are similar to you because they like to play and have fun.  Sometimes they wear different clothes, speak different languages and eat different foods. Do you think they want to be happy and filled with love too?  Let’s sing the* **May You Be Happy** song *for them so we all can be happy, peaceful and filled with love.* (Play & sing song.)

*You can take your map home today and share it with your family. I have a letter for you take home that explains to your families what the map is all about. Have fun practicing some of these new words for ‘Peace’ at home!*

**^** Much gratitude to A. Hayes and J. Zell for their contribution of this lesson.

**Methods**

 **Dimensional change card sort task (DCCS) and Flanker.** Both the DCCS and Flanker tasks were earlier versions of the NIH Toolbox Cognitive Function Battery tasks and differ slightly from that described by Zelazo et al. (in press). The Flanker task used in the present study included only 20 (rather than 25) trials in the fish and arrow blocks and the DCCS included 40 (rather than 50) trials in the mixed block.

In order to decrease practice effects, each child received a counterbalanced version of the DCCS at baseline and post-test. The versions differ in which sorting dimension (i.e., color, shape) is taught first. Performance at baseline was equivalent across both versions (*p* > .10).

**Sharing Task.** Before this task began children were presented with 6 different types of stickers and asked to select the four types they liked best. On each of the four trials a different sticker type from among those selected by the child was used for variety and novelty in order to maintain interest and reduce habituation. Pictures representing each of the four recipients were adhered to an envelope. An actual photo was used of the most and least liked child, a picture of a silhouette of a same-gendered child was used to represent the stranger, and a picture of a same-gendered child with a thermometer (girls) or ice pack (boys) represented the sick child. The examiner turned away while the child distributed the stickers. At the end of the task, the examiner placed all of the stickers from the “me” envelopes into a single envelope for the child to take with them. After the child left, the stickers from each of the other envelopes were counted.

**Delay of Gratification.** As with the DCCS, each child received a counterbalanced version of the Delay of Gratification task at baseline and post-test. The delay task versions differ in the ordering of trial reward and contingency types. Performance at baseline was equivalent across both versions (*p* > .10).

**Results**

 **Missing data.** Missing data. Pre-test behavioral data were unavailable for five children for the following reasons: did not provide assent (two in KC, two in WL), child moved (one in KC). By post-test, one additional child had moved in the KC condition and was unavailable for testing. Additional data were missing for the following reasons: sharing task (one WL due to examiner error), DCCS (two KC due to computer error, one KC due to child refusing to continue task, two WL due to computer error, one WL due to performance below range necessary for scoring), Flanker (one KC due to computer error, one KC due to performance below range necessary for scoring, one WL due to computer error).

 **Within-group correlations.** To further unpack the significant group by time interaction predicting change in social competence, correlations between change in social competence and baseline scores on variables of interest were examined separately for each group. In the KC group, significant negative correlations were found between change in social competence and each of the variables at baseline (TSC total score: *r* = -.80, *p* < .001; TSC prosocial behavior subscale: *r* = -.78, *p* < .001; DCCS overall composite: *r* = -.52, *p* = .008; Flanker composite *r* = -.58, *p* = .002). These correlations indicate that children with lower baseline scores on these variables showed larger increases in social competence over the course of the intervention. In the control group, correlations between change in social competence and the same variables at baseline were as follows: TSC total score: *r* = -.33, *p* = .045; TSC prosocial behavior subscale: *r* = -.22, *p* = .184; DCCS composite for all trials: *r* = .10, *p* = .586; Flanker composite: *r* = .30, *p* = .085. There is a pattern of stronger negative correlations between baseline scores and change in social competence for the KC group (lower scores at baseline predicting greater increases in social competence), which is consistent with the results of the baseline score by group interaction ANOVA reported.

Table S2

*Intraclass Correlation Coefficients (ICCs) of Study Variables*

|  |  |  |
| --- | --- | --- |
| Variable | ICC | Difference Score ICC |
| TSC - Total | .29 | .35 |
| TSC - PB | .33 | .26 |
| TSC - ER | .19 | .32 |
| Self Stickers | .10 | < .01 |
| Delay – all trials | < .01 | < .01 |
| Delay – 1 vs. 2 | < .01 | < .01 |
| Delay – 1 vs. 3 | < .01 | .05 |
| Delay – 1 vs. 5 | < .01 | < .01 |
| DCCS – All trials | .01 | < .01 |
| DCCS – Post-switch | .01 | < .01 |
| Flanker | .23 | < .01 |
| Learning | .45 |  |
| Health | .48 |  |
| Social | .23 |  |
| Cognition | .17 |  |
| Language | .17 |  |

Note. Intraclass correlation coefficients (ICCs) computed using baseline and difference scores (except for end-of-year grades which used post-test scores). Models conducted in the ‘nlme’ package using R statistical software with classroom modeled as the nesting variable. Delay = Delay of gratification; Self Stickers = stickers kept for self during Sharing Task; TSC = Teacher Social Competence; PB = prosocial behavior subscale; ER = emotion regulation subscale; DCCS = Dimensional change card sort computer task; DCCS - All trials = composite score across all trials; DCCS – Post-switch = composite score across post-switch trials only; Learning = Approaches to Learning; Health = Health and Physical Development; Social = Social and Emotional Development; Cognition = Cognition and General Knowledge; Language = Language Development and Communication.