

Chapter 9

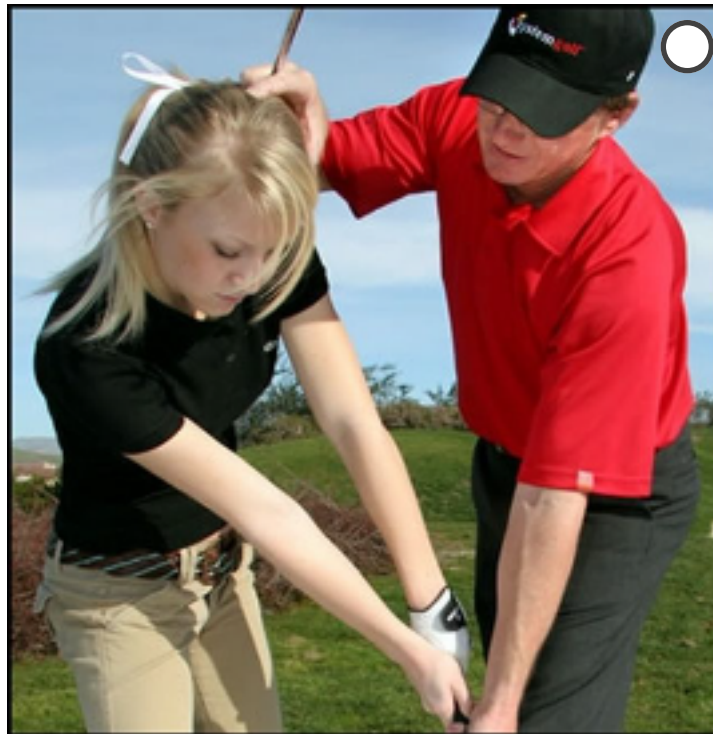
The Coaching Kata - 2

PRACTICE ROUTINE: HOW TO DO A COACHING CYCLE WITH THE 5 QUESTIONS In the Executing Phase of the IK

Practice
this
Routine

SEE
COMPARE
INSTRUCT

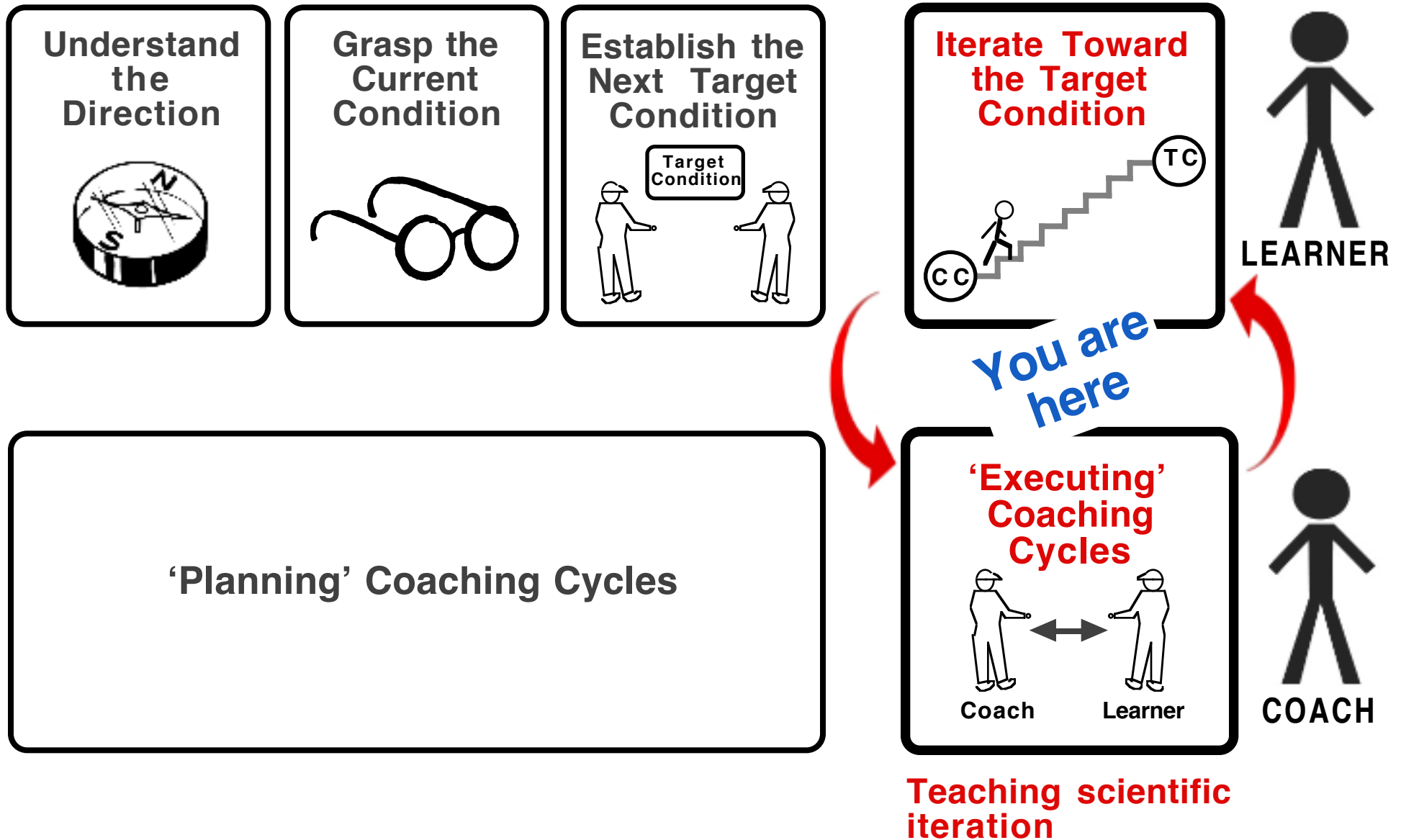
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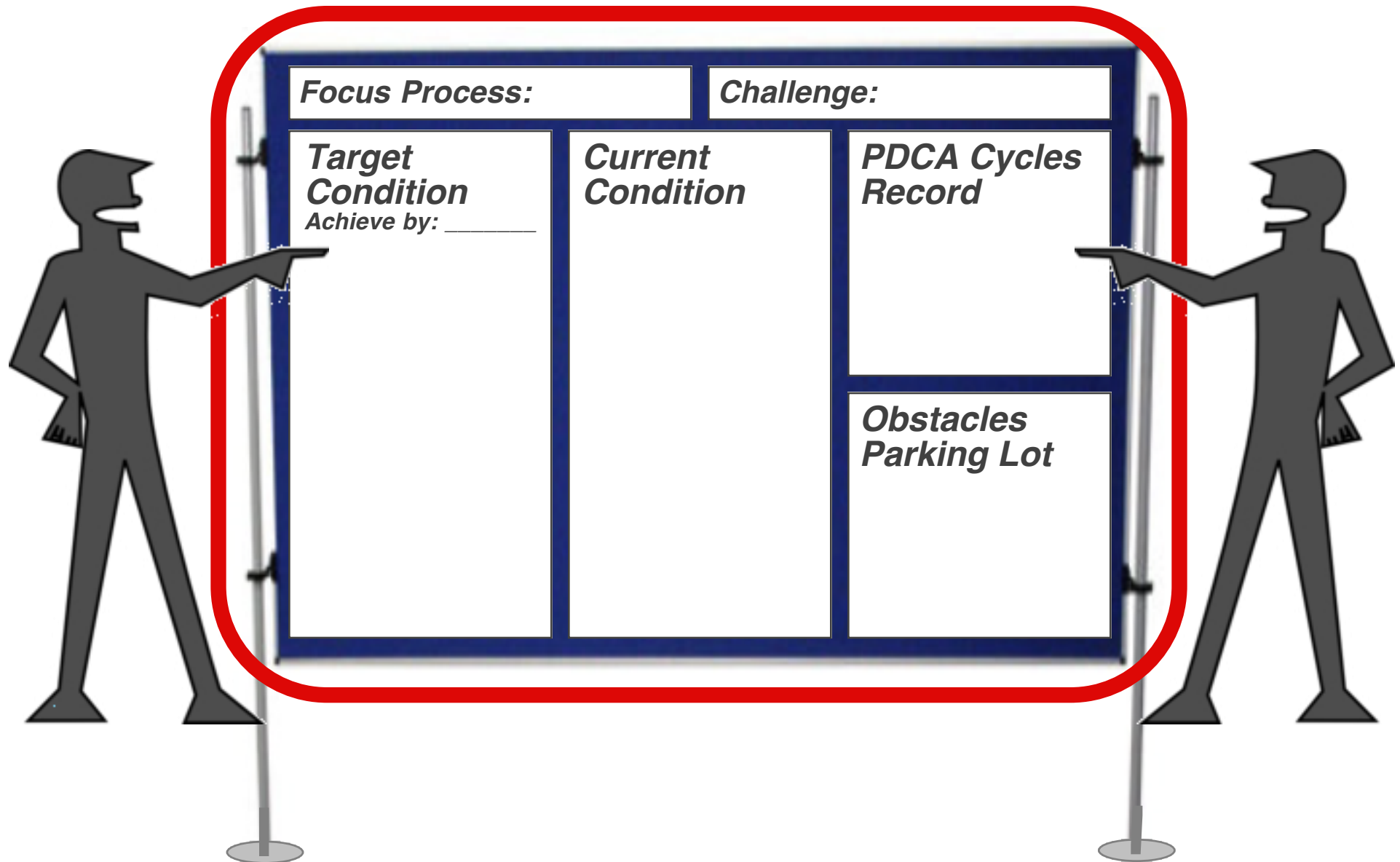
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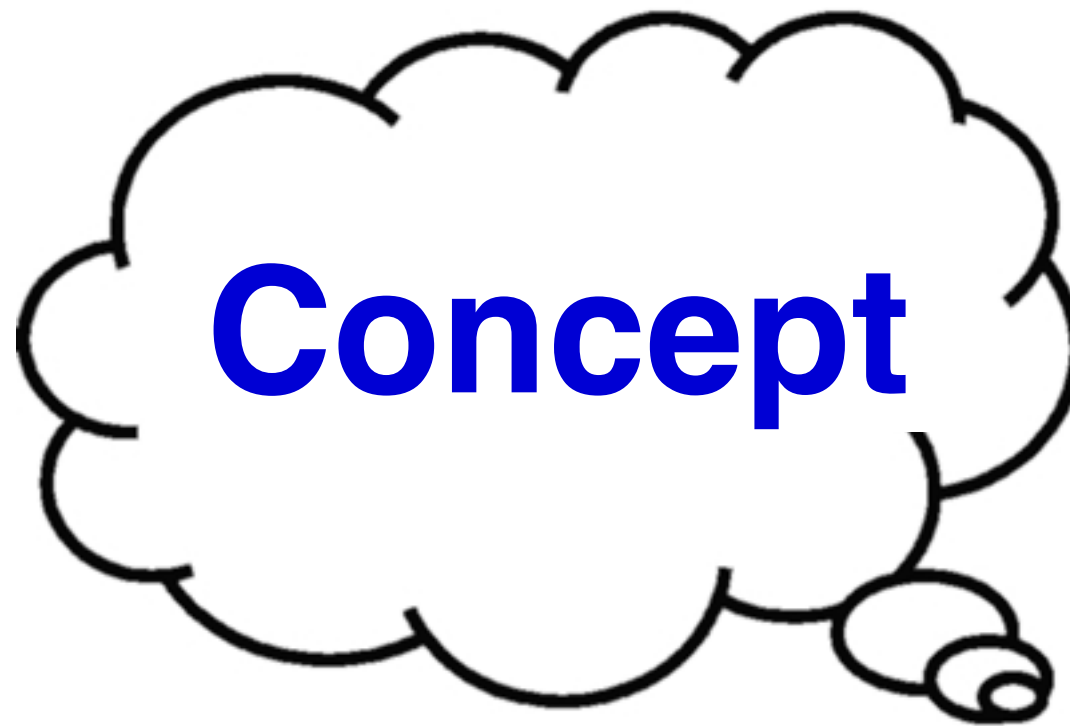
ORIENTATION



LEARNER'S STORYBOARD

In the Executing phase the Learner and Coach use the entire storyboard



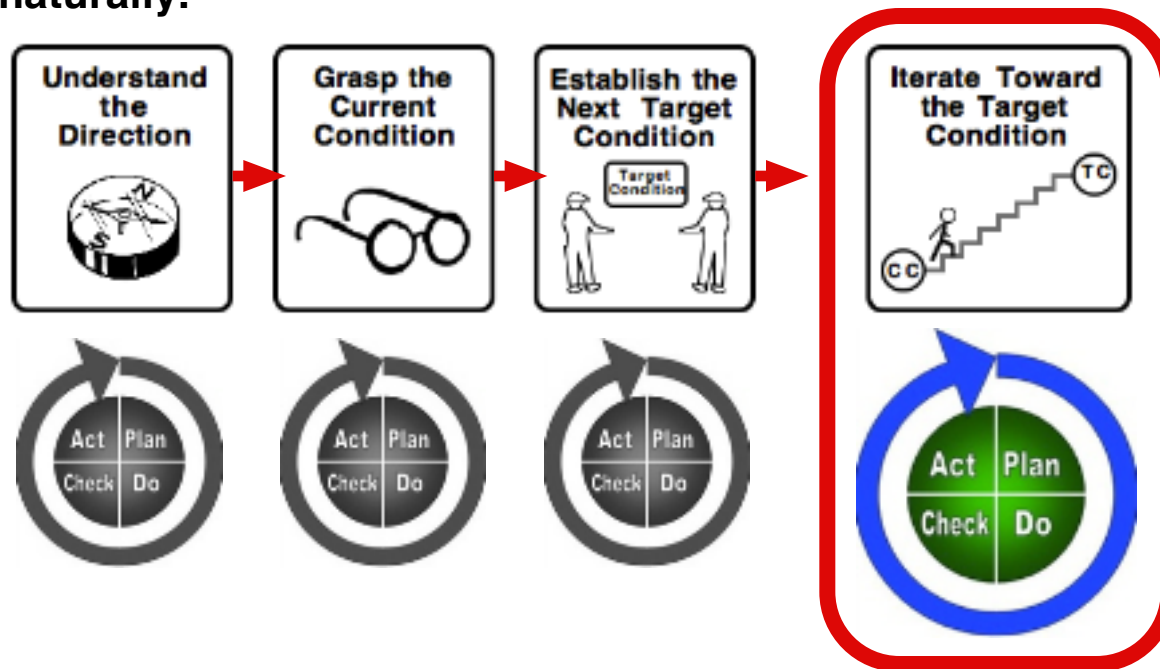


THE PENNY DROPS IN THIS STEP

Practicing Step 4 of the Improvement Kata is where the entire pattern of the Improvement Kata comes together for the Learner

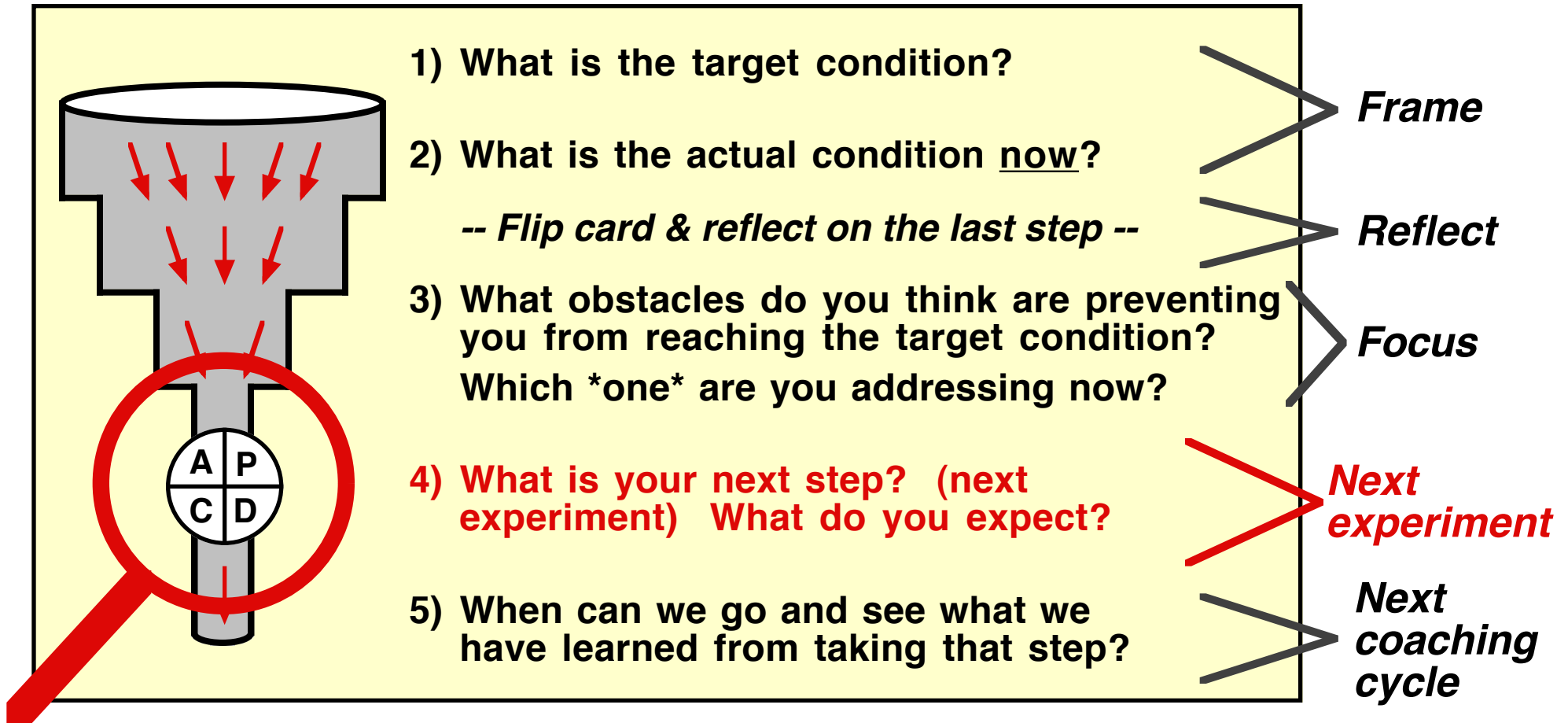
A rule of thumb is that a Learner will need to conduct at least 25 PDCA cycles (each cycle paired with a coaching cycle) in Step 4 of the Improvement Kata before the pattern of the Improvement Kata *begins* to become a mental habit. Similarly, a Coach will need to conduct at least 25 coaching cycles in Step 4 of the Improvement Kata for the coaching pattern to *begin* to take hold.

A hurdle to learning the Improvement Kata pattern is that while scientific iteration and the Five Coaching Kata Questions apply in each step of the IK, you only really learn these aspects when you get into Step 4. This means a Learner will need to have worked toward more than one target condition before s/he can start to apply the Improvement Kata pattern fluidly and naturally.

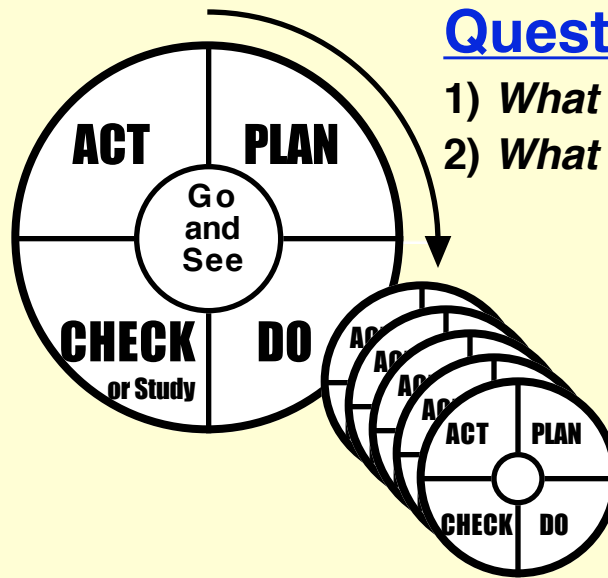


The patterns you practice and learn here will help you in all four steps of the Improvement Kata

EACH COACHING CYCLE NOW LEADS TO SOME KIND OF EXPERIMENT TOWARD THE ESTABLISHED TARGET CONDITION



THERE ARE BOTH LARGE AND SMALL PDCA CYCLES IN THIS PATTERN



Questions 1 & 2 = Large Cycle

- 1) *What is the target condition?*
- 2) *What is the current condition now?*

Questions 4 & 5 = Small

- 4) *What is your next step?
What do you expect?*
- 5) *When can we go and see
what we have learned from
taking that step?*

Illustration from *Toyota Kata*, page 144

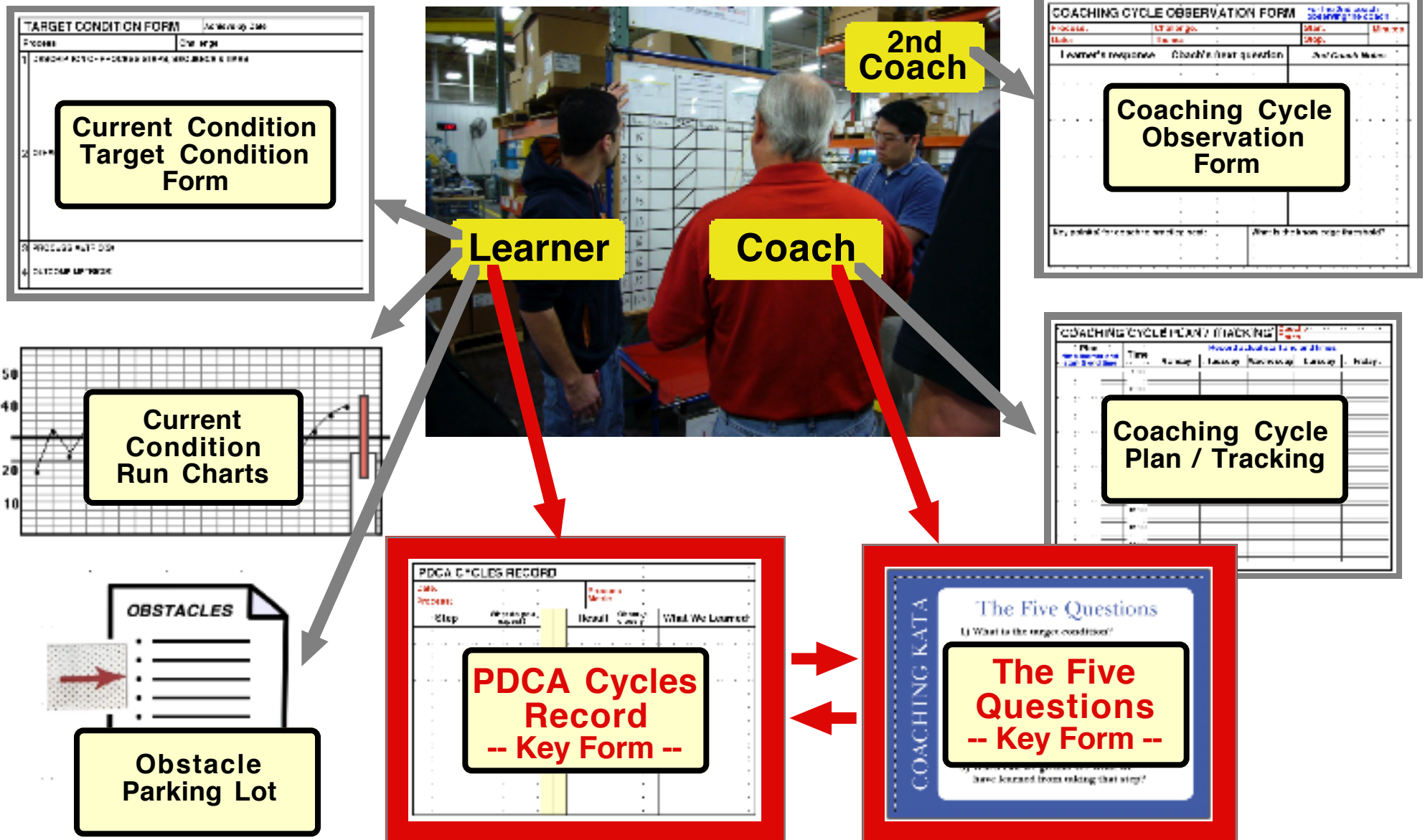


As a Coach you should be aware that learning, improvement, adaptation and innovation come from an accumulation of the **small** PDCA cycles.

It's these cycles, in particular, that you'll be coaching. These small cycles occur at the "Threshold of Knowledge."

MAIN FORMS FOR AN EXECUTING COACHING CYCLE

See the Appendix for blank copies



Explained in the Chapter about
STEP 4 of the Improvement Kata

THE TWO KEY FORMS IN THE EXECUTING PHASE

PDCA Cycles Record

PDCA CYCLES RECORD (Back to the top)			
Obstacle:		Process:	
		Learner:	Coach:
Date, step & note:	What do you expect?	What happened	What we learned



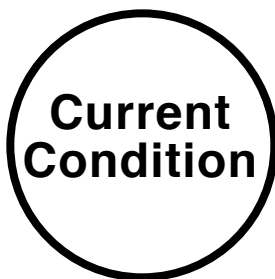
Used by the Learner



The 5 Questions

COACHING KATA	
<h3>The Five Questions</h3> <ol style="list-style-type: none"> 1) What is the Target Condition? 2) What is the Actual Condition now? <p>-----Turn Card Over-----></p> <ol style="list-style-type: none"> 3) What Obstacles do you think are preventing you from reaching the target condition? Which "one" are you addressing now? 4) What is your Next Step? (next PDCA / experiment) What do you expect? 5) When can we go and see what we Have Learned from taking that step? <p><small>*You'll often work on the same obstacle for several PDCA cycles.</small></p>	

Used by the Coach



Reminder: HOW THE LEARNER SHOULD BE USING THE PDCA CYCLES RECORD

The PDCA form is read left-to-right. Each row = one experiment. The pattern of the form repeats after each experiment.

① PREDICTION SIDE:
Before the first coaching cycle the Learner proposes the 1st step, what will be measured, and what s/he expects in the first two boxes of the form







PDCA CYCLES RECORD <small>(Each row = one experiment)</small>			
Obstacle:		Process:	
		Learner:	Coach:
Date, step & metric	What do you expect?	What happened	What we learned
X	X	X	X
X	X		

② EVIDENCE SIDE:
Once the step (experiment) is done, the Learner fills in data on What Happened, reflects by comparing that with the expectation, and records What We Learned

③ *Based on what was learned in the last experiment, the Learner proposes the next step, what will be measured and what s/he expects*

The information on the PDCA Cycles Record should be recorded by the Learner before the coaching cycle. During the coaching cycle you will either validate the Learner's proposed next step (next experiment), or help the Learner fine tune his/her plan for the next step.

WHY YOU HAVE THE LEARNER USE THE PDCA CYCLES RECORD

-  It teaches the Learner the scientific pattern of thinking and acting.
-  It forces the Learner to write down what they expect to happen.
-  It forces the Learner to think things through before the next coaching cycle.
-  It teaches the Learner to document facts and data in writing, rather than relying on verbal communication and assumptions.
-  It has the Learner prepared for the next coaching cycle. The Learner knows what s/he is going to present, instead of making things up or trying to recall from memory.
-  It helps the Coach focus on experimenting instead of just on getting through the Five Questions.

COACHING CYCLE DO'S AND DON'TS



Schedule daily coaching cycles.....	Conduct coaching cycles only infrequently or irregularly
Conduct your first daily coaching cycle..... early in the day, so the Learner can do the next step (the next experiment) that day	Do the first coaching cycle near the end of the day
Proceed systematically by..... following the 5 questions	Permit unstructured, meandering disorganized discussions
Determine whether or not the Learner..... is operating within the corridor of the Improvement Kata	Ask questions to audit if the Learner is doing what they said they'd do Ask questions to get the Learner to implement your preconceived solutions



Ask the 5 questions while standing.....Conduct coaching cycles in the office at the process.

Have the Learner point to items on.....Just talk the storyboard while s/he is talking.

Have the Learner retime and graph the..... Use old current-condition data process metric before the coaching cycle.

**Remember, Question 5 is about..... Ask Question 5 as
“What are we learning?” “When will you have it done?”**

**End the coaching cycle when the next..... Keep on discussing possibilities
step and the expectation are clear and after the next experiment has
written on the PDCA Cycles Record been defined**

PRACTICE THE 5 QUESTIONS SO YOU CAN *LISTEN*

**“Most people do not listen with the intent to understand;
they listen with the intent to reply” ~ Stephen R. Covey**

Coaching supports both the development of Improvement Kata skills in the Learner and the attainment of target conditions. Coaching cycles are your method for daily teaching, and the Five Questions make up the flow of the dialog between you and the Learner in the *Executing* phase.

However, beginner coaches are usually mechanical as they are getting accustomed to going through the Five Questions. In your beginner-coach stage you'll probably be too focused on the Five Question card and not enough on seeing what the Learner is saying and whether that conforms to the intent of the Improvement Kata pattern. Until asking the Five Questions becomes habitual for you it will naturally be a struggle to ask the 5Q *and* be assessing what the Learner is doing.

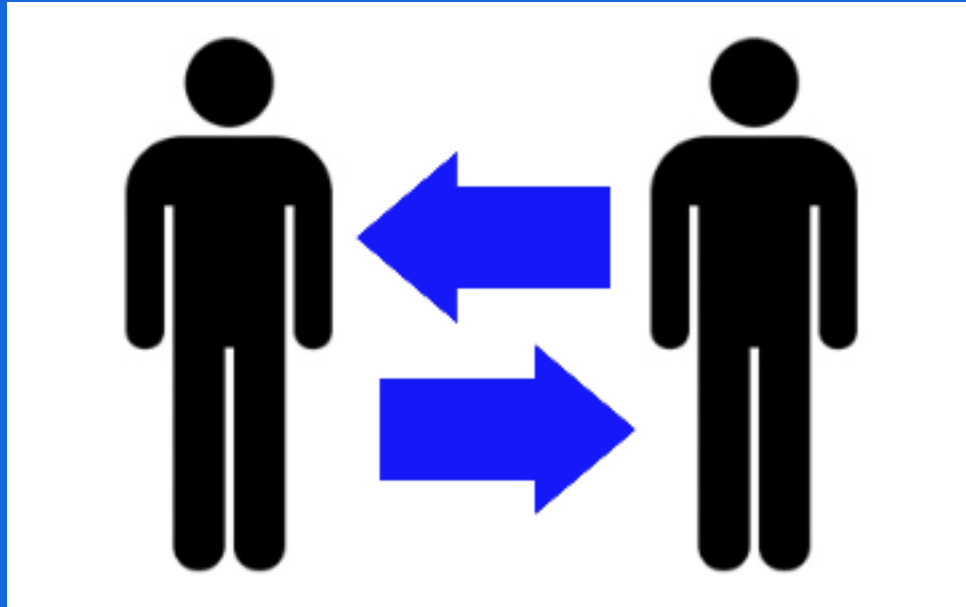
Here are 3 practice routines to help you get proficient with the 5Q and allow you to shift more of your attention to what the Learner is doing:

- > Pay close attention to the content of the Learner's PDCA Cycles Record. This helps you focus on PDCA instead of just on the Five Questions.
- > Get frequent practice with the Five Questions by also using them at other times daily -- for instance in meetings -- not just during coaching cycles.
- > In Stage 1 of your practice state the Five Questions exactly as they are written on the card, so they will grow into a habit.



How to Practice

A Coaching Cycle Step-by-Step



The Coach's routine in an Executing-phase coaching cycle looks like this

Includes



INSTRUCTIONS



WHAT THE LEARNER SHOULD DO

If possible have the Learner *show you what they are talking about*

0	What is the challenge?	Learner explains what s/he understands the overarching challenge to be, which comes from the level above the Learner.
1	What is the target condition?	Learner reads through the description of the target condition that's on the storyboard, pointing to the items as s/he reads.
2	What is the actual condition now?	Learner reads through the facts, data and diagrams on the storyboard of the current condition as it is now (not the initial current condition), pointing as s/he reads.
REFLECTION	What was your last step?	Learner reads the first box on the PDCA Cycles Record.
	What did you expect?	Learner reads the second box on the PDCA Cycles Record.
	What actually happened?	Learner reads the third box on the PDCA Cycles Record.
	What did you learn?	Learner reads the fourth box on the PDCA Cycles Record.
3	What obstacles do you think are preventing you from reaching the target condition? Which *one* are you addressing now?	Learner reads through the items on the Obstacles Parking Lot and then points to the obstacle they are currently working on. The Learner should stick an arrow next to this obstacle. The Learner may work on one obstacle for several PDCA cycles.
4	What is your next step? (next PDCA experiment) What do you expect?	Learner proposes the next step, reading the first and second boxes in the next row of the PDCA cycles record. Ensure the Learner is designing a good next experiment before you approve it.
5	When can we go and see what we have learned from taking that step?	Learner proposes date & time for the next coaching cycle. Ensure that the Learner is doing the experiment as soon, quickly & cheaply as possible. Agree on facts & data to bring to next coaching cycle.

BEGIN THE COACHING CYCLE BY PUTTING THE LEARNER AT EASE

A coaching cycle does not judge success or failure

- > *Begin by greeting one another and shaking hands.*
- > *Stand next to the Learner facing the Learner's storyboard, rather than always facing the Learner head on.*
- > *At the beginning, explain the coaching method to the Learner so s/he can understand what is taking place.*



A coaching cycle is an interaction, not an audit or surprise check. The Learner knows when the Coach is coming, what s/he will ask (the 5 Questions) and prepares the information in advance of the coaching cycle.

Novice learners may perceive coaching as meaning they did something wrong, but the purpose is *not* to control or to get people to do what they say. A coaching cycle is a dialog, not an exercise of authority.

There should be a genuine interest in both you and the Learner in the target condition you are trying to achieve, what you are learning and what will be the next step.

HELP THE LEARNER FEEL OK BEING A BEGINNER



It can be uncomfortable to be a beginner, because you feel unsure of yourself and lose a sense of identity. A beginner becomes vulnerable.

One key to putting the Learner at ease may be to help them realize it's normal to be a beginner, just like an athlete, with the Improvement Kata routines. Your Learner will naturally try to be skillful right from the start, especially if you are his or her boss. So it can help to create a mindset that it's OK to make mistakes and of enjoying the discovery and learning process.

Feel free to explain to the Learner that what s/he's doing is practicing a skill pattern to make it a habit. Many of us practice with more interest and motivation when we know what we're doing and why.

ASK THE LEARNER *WHAT IS THE CHALLENGE?*

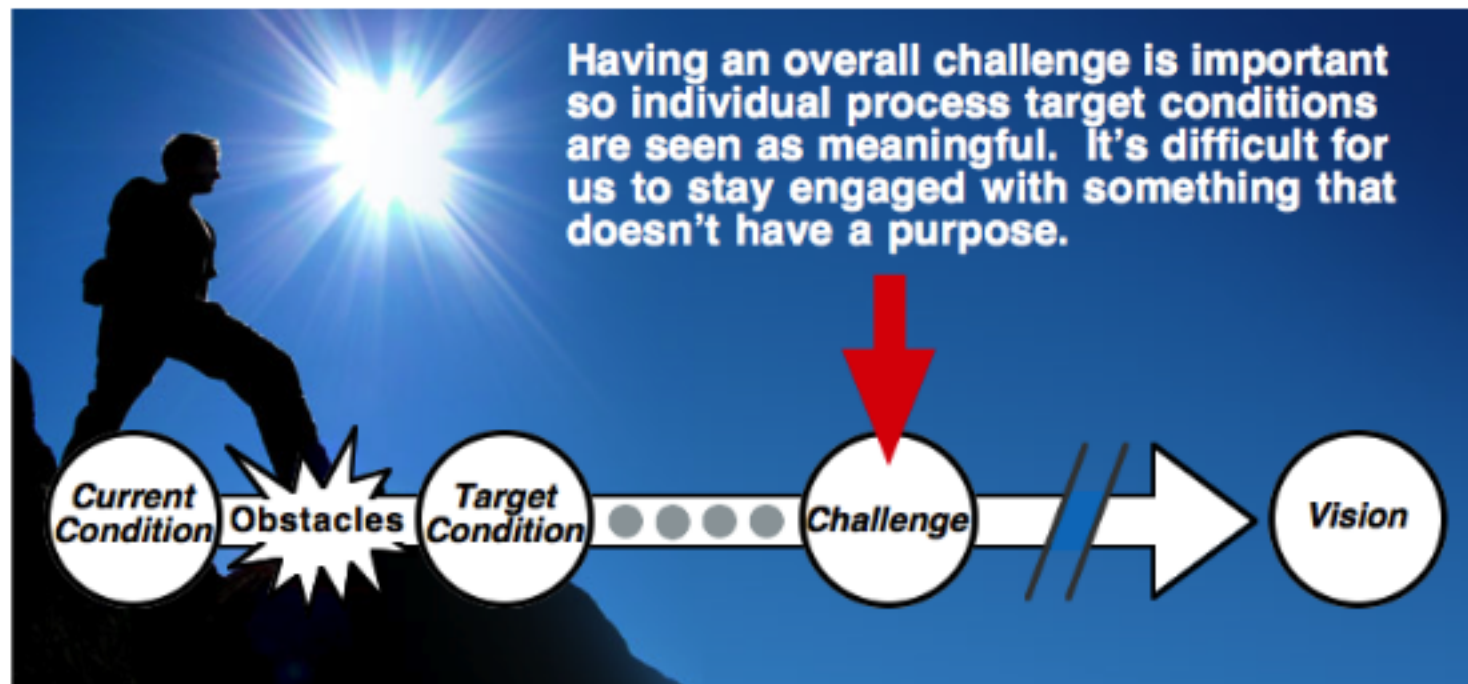
Following the flow of the Storyboard, have the Learner name the focus process and state the overarching Challenge, i.e., the direction in which s/he is striving

Focus Process:		Challenge:
Target Condition Achieve by: _____	Current Condition	PDCA Cycles Record
		Obstacles Parking Lot

THE CHALLENGE FRAMES THE COACHING CYCLE

Before you begin the Five Question coaching dialogue, have the Learner reiterate the overarching Challenge they're working toward.

This connects the Learner's Target Condition to the larger business objective from the level(s) above them and helps the Learner recognize how his or her efforts fit in and connect with the bigger picture. The rest of the Coaching Cycle dialog is anchored by the Challenge.



Now you can get into asking the
Five Coaching Kata Questions





Questions

1 & 2

MORE FRAMING & ANCHORING Orienting Yourself

1) What is the target condition?

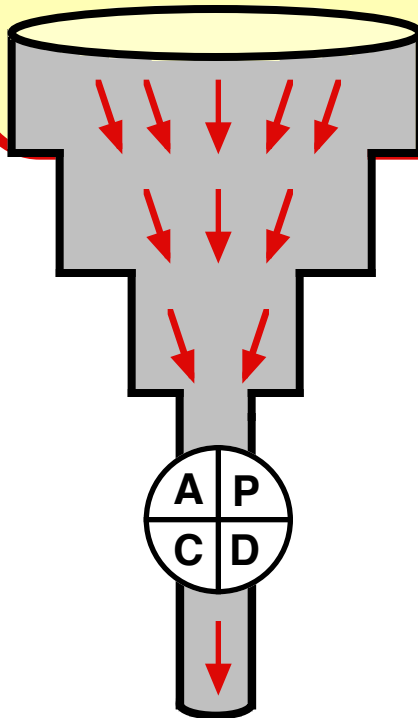
2) What is the actual condition now?

-- Flip card & reflect on the last step --

3) What obstacles do you think are preventing you from reaching the target condition?
Which **one** are you addressing now?

4) What is your next step? (next PDCA experiment) What do you expect?

5) When can we go and see what we have learned from taking that step?





CLARIFYING QUESTIONS FOR QUESTION 1

(Target Condition)



--> The target condition should be measurable, have an achieve-by date and tie in to the overall challenge.

- *“Please read through the target condition.”*
- *“What do you want to be happening?”*
- *“What is the pattern you’re trying to achieve?”*
- *“What are the intended process steps and sequence?”*
- *What is the achieve-by date?*
- *“Tell me about how this target condition relates to the overall challenge.”*
- *“Can you describe the target condition with numbers?”*
- *“How are you measuring it?”*
- *“What is the process metric? What value do you want it to have?”*
- *“What is the outcome metric? What value do you want it to have?”*



CLARIFYING QUESTIONS FOR QUESTION 2 (*Current Condition*)



--> Question 2 refers to the current condition now, not the initial current condition.

- *“What are the latest facts and data for the current condition now?”*
- *“How do you know?”*
- *“Do you have data?”*
- *“Can you show me?”*

--> From this point forward a useful question is:

- *“What do you think?”*

Remember, you're asking this question to see if the Learner is thinking scientifically according to the pattern of the Improvement Kata. An answer such as, *“I think we're not sure yet”* is scientific, but answers such as, *“I think what's going on is...”* are more conjecture.

--> To ensure the Learner's comments are based on facts and data, not assumptions, at any time you can say, *“Tell me more about how you know that.”*

AT QUESTION 2:

Review the current values for the process metric and outcome metric. These are the minimum metrics that the Learner should have graphed.



Have the learner chart this data in run charts

Process Metric: Used to check the process's pattern in real time.

Example: Exit cycles piece to piece.

Outcome Metric: For periodically checking if improvement efforts are having the desired overall effect.

Example: Pieces per shift

KEY POINTS FOR QUESTIONS 1 & 2

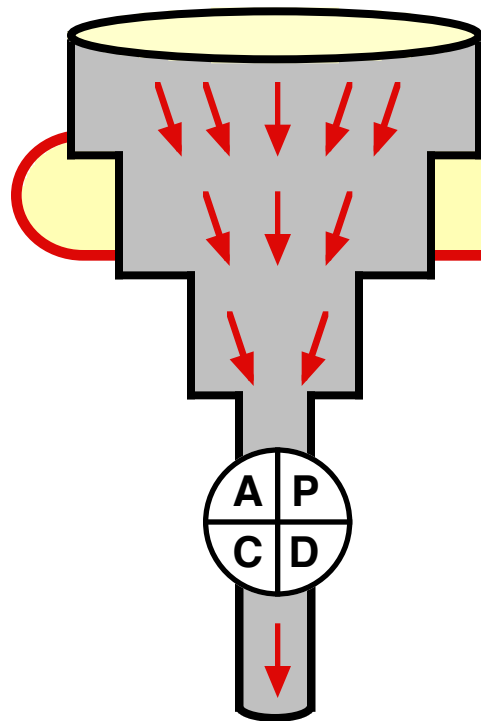
- ❑ Consensus on both the target condition (Question 1) and current actual condition (Question 2) is essential to avoiding endless discussion. What is the Learner trying to achieve and where are they now?
- ❑ Don't skip over Questions 1 & 2, even if it seems a bit like play-acting. Go through all 5 questions in each coaching cycle because you are trying to frame the dialog and teach the thinking pattern inherent in the 5 questions.
- ❑ Many new coaches ask, *“Do I really need to ask Question 1 every coaching cycle?”* The answer is ‘yes’ for two reasons:
 - It's “Anchoring.” The rest of the coaching cycle then relates back to the first question.
 - Asking Q1 in each coaching cycle helps you ensure that the Learner remains aligned to to the overall Challenge.
- ❑ Whenever possible you should go and see what the Learner is talking about. *“Show me”* and *“Tell me more about...”* are useful coaching phrases at any point in the coaching cycle.

KEY POINTS FOR QUESTIONS 1 & 2

- ❑ During the coaching cycle ask the Learner to physically point at relevant supporting documents and data. For example, at Question 1 the Learner should point to the Target Condition Form and read the target condition
- ❑ Question 2 is not a review of steps the Learner has taken. The Learner should describe how the focus work process is actually operating now relative to the target condition.
- ❑ For Question 2 the Learner should point to facts and data on his/her storyboard.
- ❑ A coaching-cycle dialog should use current facts and data as much as possible. At the end of each coaching cycle you and the Learner will agree on what data the Learner should collect and graph *before* the next coaching cycle.
- ❑ For Question 2 the learner should not refer back to the initial current condition. The learner should describe the condition now, based on recent direct observation.



Reflect



1) What is the target condition?

2) What is the actual condition now?

-- Flip card & reflect on the last step --

3) What obstacles do you think are preventing you from reaching the target condition?
Which **one** are you addressing now?

4) What is your next step? (next PDCA experiment) What do you expect?

5) When can we go and see what we have learned from taking that step?

ALWAYS CHECK THE RESULTS OF THE LAST STEP

This is the *Evidence* and *Evaluate* portion of the learning cycle

Until the Learner checks, no one knows with certainty what the result of a step will be. Up to that point what the Learner expects to happen is only a hypothesis.

This is an important point in the coaching cycle. What the Learner learns from the last step helps him/her see the next threshold of knowledge and determine the next step (the next experiment).

To reflect, the Coach asks these four questions:

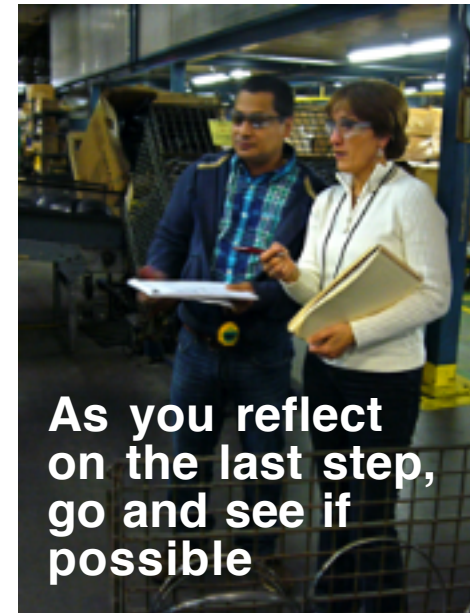


Q1) *What was your last step?*

Q2) *What did you expect?*

Q3) *What actually happened?*

Q4) *What did you learn?*



**As you reflect
on the last step,
go and see if
possible**

TO REFLECT ON THE LAST STEP, LOOK AT THE LAST FILLED-IN ROW OF THE PDCA CYCLES RECORD

The Learner should have recorded the results and what was learned from the last step on the **right side** of the PDCA Cycles Record before the coaching cycle. The Learner should point to boxes 1-4 when responding to the 4 reflection questions.

(Q1 & Q2) The Learner should read through the prediction and expectation s/he recorded on the **left (prediction) side** before the experiment.



(Q3) Next the Learner should read the data on what actually happened, which is summarized in the *"What Happened"* box on the **right (evidence) side**.

(Q4) Then the Learner should compare the evidence with the prediction and describe what s/he learned about the focus process, or the process of improving it, which is summarized in the *"What We Learned"* box.

PDCA CYCLES RECORD			
Process:		Obstacle:	
Learner(s):		Coach:	
Date, Step & Metric	What do you expect?	What Happened	What We Learned
Q1	Q2	Q3	Q4

Have the Learner immediately adjust or correct what was written if necessary

ACTION

PDCA CYCLES RECORD			
Process:		Obstacle:	
Learned:	Coach:		
Date, Step & Metric:	What do you expect?	What Happened	What We Learned
PREDICTION		EVIDENCE	EVALUATE
A Coaching Cycle Start the Experiment			



Q1: What was your last step?

- *“Let’s look at the ‘prediction’ side of the PDCA Cycles Record.”*
- *“What was the threshold of knowledge?”*
- *“What did you plan to do?”*

Q2: What did you expect?

- *“What did you think would happen?”*

Q3: What actually happened?

- *“Now let’s look at the ‘evidence’ side of the PDCA Cycles Record.”*
- *“Did you collect any data?”*
- *“What does the data say?”*
- *“What specifically did you observe?”*

Q4: What did you learn?

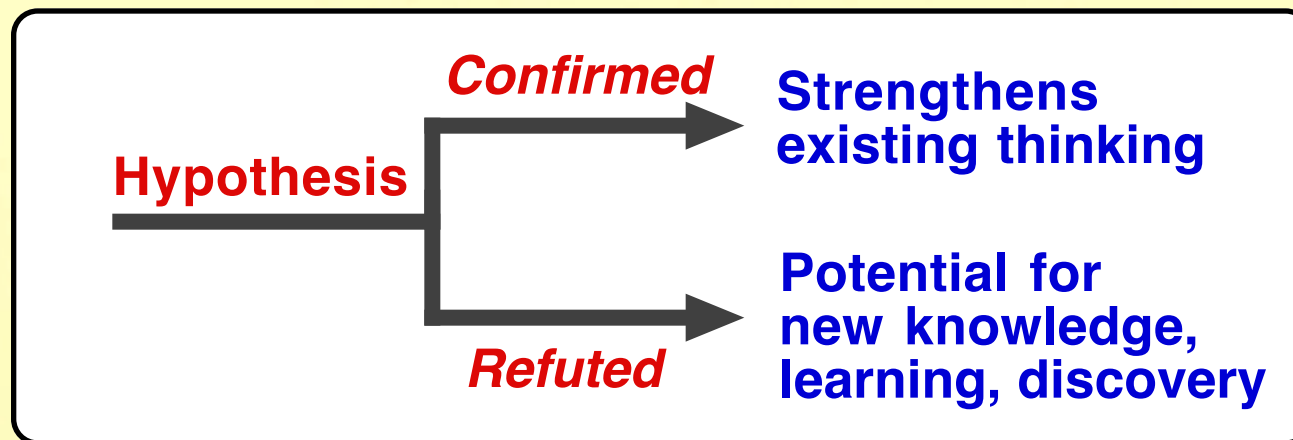
- *“If a hypothesis was being tested: ☐ Confirmed ☐ Refuted ☐ Can’t Tell*
- *“What do the data & your observations lead you to believe?”*
- *“What are the implications for your next step?”*
- *“Why is this important?”*
- *“How will this help you?”*

KEY POINTS FOR THE REFLECTION

- ❑ Some of the best experiments have an unexpected result -- a surprise -- because that's how you learn about what steps will be necessary to reach the target condition.

A target condition is reached through numerous small learning steps and experiments, many of which will generate “negative” (but highly-useful) results.

The Learner must experience small mistakes - prediction error - in order to learn.



KEY POINTS FOR THE REFLECTION

The coach should depersonalize the experiments

- ❑ Acknowledging and learning from prediction error can be difficult because it runs counter to our instincts.

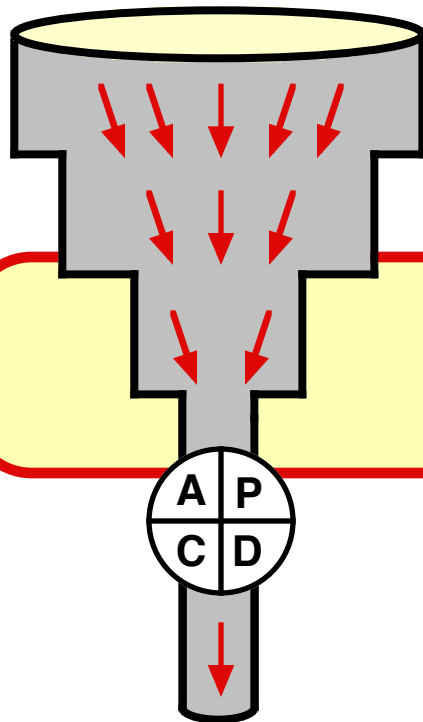
If the Learner feels threatened by problems s/he may too quickly jump to more countermeasures, rather than analyzing and learning from the situation.

- ❑ The idea is to not stigmatize prediction errors, but to use them to learn. To function in this way the reflection should have a positive, challenging, no-blame feeling. It's the coach's responsibility to create this depersonalized atmosphere.

The Coach should think of an abnormality or problem not as good or bad, but as simply an occurrence that may teach us something about our work system.

Of course, the Learner should continue rapidly experimenting and *learning forward* to achieve the target condition by its set achieve-by date.

STAY FOCUSED - ONE OBSTACLE AT A TIME



1) What is the target condition?

2) What is the actual condition now?

-- Flip card & reflect on the last step --

**3) What obstacles do you think are preventing you from reaching the target condition?
Which **one** are you addressing now?**

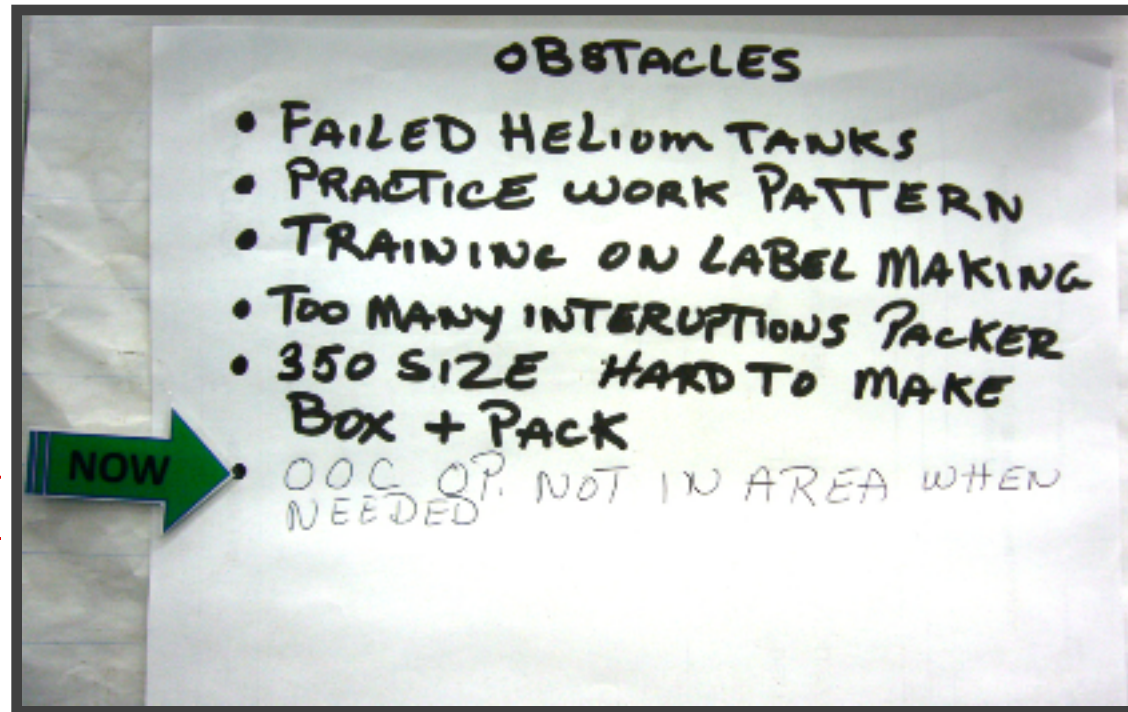
4) What is your next step? (next PDCA experiment) What do you expect?

5) When can we go and see what we have learned from taking that step?

HAVE THE LEARNER READ THROUGH THE OBSTACLE PARKING LOT



An arrow should indicate the obstacle currently being addressed



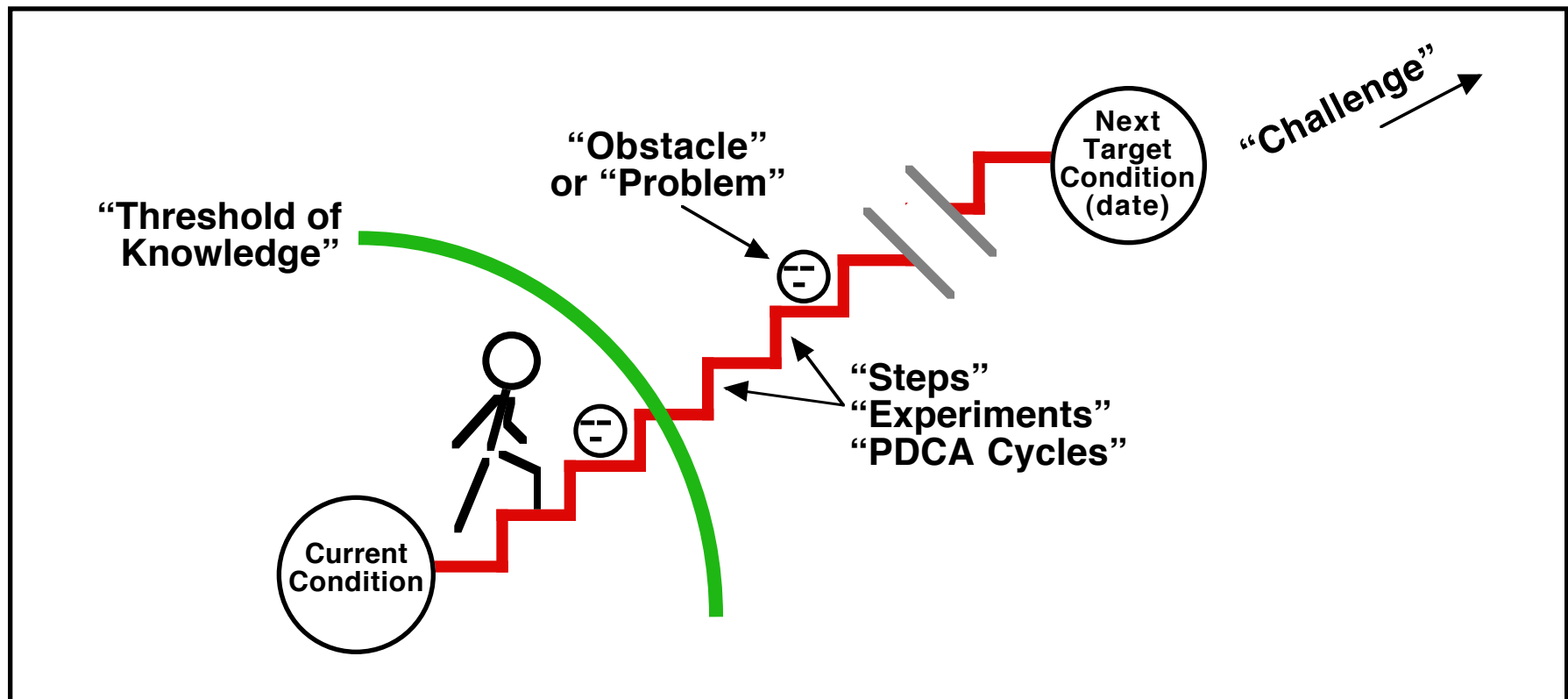
The Learner should have updated the Obstacles Parking Lot if new obstacles were discovered or some obstacles are no longer an issue.

Have the Learner read through the current list of obstacles. An arrow should indicate the obstacle that's currently being worked on. The current obstacle should also be written on the PDCA Cycles Record.

Remember, the Learner uses this Obstacles Parking Lot simply to record perceived obstacles or obstacles encountered on the way to the target condition. It's not an action-item list and the Learner will probably not end up working on all the listed obstacles.

PRACTICE USING THE RIGHT TERMINOLOGY

What the Learner does to overcome an **obstacle** or **problem** on the way to the target condition is called **steps**, **experiments** or **PDCA cycles**. It almost always takes more than one step to break through an obstacle. When the Learner overcomes an obstacle it means they've developed a **solution** to a problem.





CLARIFYING QUESTIONS FOR QUESTION 3 (*Obstacles*)



--> This question is about what problem you are currently trying to solve.

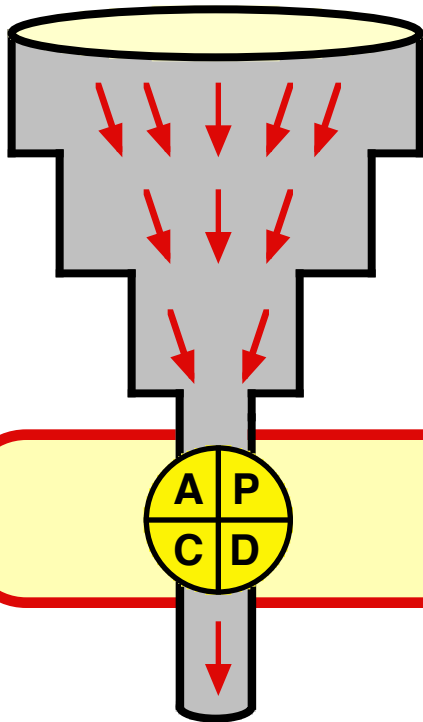
- ***“Are there any new obstacles you have identified?”***
(Have the Learner add these to the parking lot)
- ***“Have you overcome any of the previously listed obstacles?”***
(Have the Learner cross these off on the parking lot)

KEY POINTS FOR QUESTION 3

- ❑ Work on one obstacle at a time.
- ❑ It almost always takes more than one step to break through an obstacle, and often many more. The Learner may work on one obstacle for some time, going through a series of PDCA cycles related to that obstacle. This is normal.
- ❑ The solution to an obstacle is developed via PDCA cycles. You overcome an obstacle by trying, failing, adjusting and trying again. It's in taking these steps that ingenuity, adaptiveness and innovation happen.
- ❑ Don't worry about selecting the biggest or most important obstacle. Just have the Learner get started. The path will unfold as the Learner experiments. The biggest obstacles will wait for you.
- ❑ With novice learners, don't start with the most difficult obstacle. Have the Learner get some experience with the Improvement-Kata pattern first.
- ❑ The Learner is free to work on any obstacle but should not just work on what s/he *thinks* are obstacles. Keep your eyes open for what obstacles *actually* arise along the way. Working on one obstacle will often lead you to a deeper issue that was not apparent before.

PLANNING THE NEXT PDCA EXPERIMENT

Ensure that the Learner plans a good experiment



- 1) What is the target condition?
- 2) What is the actual condition now?
-- Flip card & reflect on the last step --
- 3) What obstacles do you think are preventing you from reaching the target condition?
Which **one** are you addressing now?
- 4) What is your next step? (next PDCA experiment) What do you expect?
- 5) When can we go and see what we have learned from taking that step?

HAVE THE LEARNER DESCRIBE THEIR NEXT EXPERIMENT AND HOW THEY WILL CARRY IT OUT

Based on evaluating the findings from the last experiment, the Learner should have described his/her proposed next step and expectation on the **left (prediction) side** of the PDCA Cycles Record before the coaching cycle.

The Learner should point to boxes 1 and 2 when responding to Coaching Kata Question 4.



This is a place to go into some depth in your dialog with the Learner. Use the checklist on the next page to either validate the Learner's proposed next step or help the Learner fine-tune the proposed step.

PDCA CYCLES RECORD			
Date: 2-20-12 2 ND SHIFT		Process: PALLET ON FLOOR	
Process: PACK		Metric:	
Step	What do you expect?	Result	What We Learned
MATERIAL HANDLING: COMPLETE START FINISH TASK IN RT		PICKER COMPLETED TASK AT OR UNDER TAT	PICKER STILL HAD TO MAKE LABELS
PICKER REMOVE FROM GOODS + PLACE PALLET ON FLOOR		W/TAKE LAYS VARIATION & PICKETS UNDER	PICKER IS GO TO GUYARD AREA
FRONT MACHINE 2nd SHIFT			
DATE: 2-20-12			
LIST OOC ACTIVITIES			

PDCA CYCLES RECORD			
Process:		Obstacle:	
Learner's:		Coach:	
Date, Step & Metric	What do you expect?	What Happened	What We Learned
Last Experiment			
Next Experiment			
Prediction Side			

Have the Learner immediately adjust or correct what was written if necessary



COACH'S CHECKLIST FOR PLANNING THE NEXT EXPERIMENT

Take time to help the Learner design a good experiment

- ☐ You must identify the current Threshold of Knowledge.
Ask the Learner what is the current knowledge threshold.
What do you (Coach) think is the current knowledge threshold?
- ☐ Is the experiment being done at the current threshold of knowledge?
- ☐ Is the experiment a single-factor experiment?
(This is not always possible.)
- ☐ Does the Learner have a plan to test their prediction soon, quickly and inexpensively?
- ☐ If the prediction fails will no one be harmed?
- ☐ Is the step measureable? Will the Learner be able to use facts and data to tell if the prediction was correct or not.
- ☐ The Learner has stated what s/he expects to happen, but does not actually know what will happen.
- ☐ Is the next step/experiment part of a chain, i.e., it springs from what was learned in the previous experiment?

“WHAT DO YOU EXPECT?”

Before the next PDCA experiment is conducted, be sure to explore what the Learner expects from the experiment



In order to be scientific the Learner must state in advance what s/he expects from the next step. This is what you will be testing against, and it is this comparison that leads to surprise and learning.

Asking the Learner what they expect also helps you see if the learner is thinking systematically and scientifically, or only stabbing at the obstacle.

You can actually ask two slightly different questions here:

“What do you expect to happen?” and “What do you expect to learn?”

Also asking what the Learner expects to learn from the step helps cement in his or her mind that any step is an experiment. Treating ideas as hypotheses to be tested helps everyone move past ego.

These questions are one place you do want the Learner to go beyond the threshold of knowledge and predict. Here it's OK to for the learner to say things like, *“I think...”*

THE EXPECTATION DEPENDS ON THE TYPE OF EXPERIMENT

Type of experiment	What the Learner can expect
Go and See Observation and data collection, without changing anything, to learn more about a process or situation.	The Learner should expect that they will get information about how something is currently functioning.
Exploratory Experiment Introducing a change in a process to see, via direct observation, how the process reacts.	The Learner should expect to learn more than they can from direct observation alone.
Testing a Hypothesis Introducing a change, ideally in only a single factor, with a prediction of what will happen.	The Learner must predict the outcome of the change. This is the hypothesis to be tested.



CLARIFYING QUESTIONS FOR QUESTION 4

(The Next Experiment)



--> (1) Help the Learner design a good next experiment, based on what was learned in the last experiment:

Key
Points

- ***“What do we need to learn next?”***
- ***“How will you test it?”***
- ***“How will you measure it?”***
- ***“What is the threshold of knowledge now?”***
- ***“How exactly will the experiment be done?”***
- ***“Exactly what data will you collect?”***
- ***“Who / how will you collect it?”***
- ***“Can you show me?”***

*Instead of, “Why?”
say, “Tell me more
about...”*

--> (2) Clarify what the Learner predicts:

- ***“What do you expect to happen?”***
- ***“What do you expect to learn?”***

Don't say, ***“Let's try it and see if it works,”*** since this makes an experiment a matter of success versus failure. Say, ***“Let's try it and see what we learn.”***

KEY POINTS FOR QUESTION 4



Important

- ☐ Coach and Learner must have identified the **current knowledge threshold** before the next step is determined. The current knowledge threshold often defines what will be the next experiment. Often this will send you back to investigating something you thought you already knew.

The Learner may not recognize when s/he goes from knowledge to assumption. Here the Coach should get the Learner back “in the corridor” specified by the Improvement Kata. Don’t speculate, get facts and data.
- ☐ Designing and conducting the next experiment toward the target condition is a great place to involve process operators and get their ideas.
- ☐ Ideally you’re guiding the Learner into making a chain of PDCA cycles, where the next step builds on what was learned in the last step.
- ☐ The Learner should set up experiments so that mistakes & unexpected results will not harm the customer process.
- ☐ In many coaching cycles the next step is not yet a process change. Activities such as “planning the next step” or “further analysis” can be a next step. That’s normal.

KEY POINTS FOR QUESTION 4

- ❑ At the start, nearly everyone makes PDCA cycles too big, i.e., takes steps that are too big. This often overshoots the knowledge threshold and hampers learning. Guide the Learner into PDCA cycles that are as small and as rapid as possible for the situation. You're not looking for big leaps. You're looking for a good experiment.

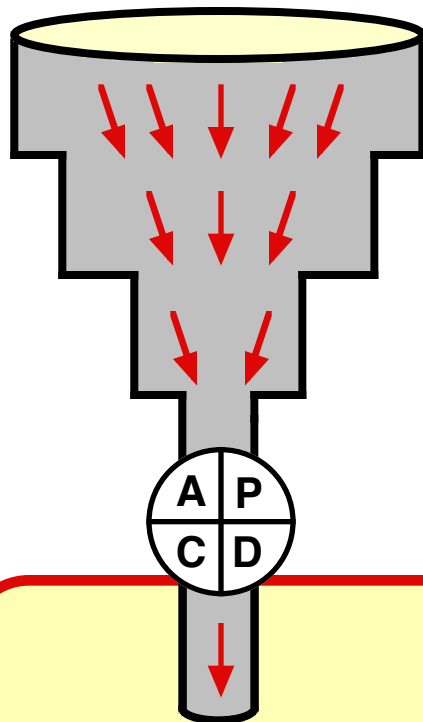
Caution: if your coaching cycles are not daily, the learner's steps will tend to get too big. The Learner will naturally introduce lots of changes before you return.

- ❑ First experiments often involve shifting work elements around, to find a work pattern that functions. Keep in mind that this is only moving existing ways of doing things around, rather than true improvement.

At some point the Coach should advise the Learner that just shifting work elements is no longer acceptable, and that it is time for true improvement toward the target condition. This is where the going gets tougher and improvement gets real.

- ❑ **As soon as the next step (not a list of steps) is clear, the coaching cycle is reaching its end.** There's no need for looking further ahead or long discussion beyond this point. Now it's time to take the next step as quickly as possible.

PREPARING FOR THE NEXT COACHING CYCLE



1) What is the target condition?

2) What is the actual condition now?

-- Flip card & reflect on the last step --

3) What obstacles do you think are preventing you from reaching the target condition?
Which **one** are you addressing now?

4) What is your next step? (next PDCA experiment) What do you expect?

5) When can we go and see what we have learned from taking that step?



CLARIFYING QUESTIONS FOR QUESTION 5

(Next Coaching Cycle)



--> Set a specific date and time. When will the experiment be done and when is the next coaching cycle?

--> Use clarifying questions to teach the Learner to conduct rapid tests whenever possible

- ***“Can we do this experiment sooner?”***
- ***“Can we do it today?”***
- ***“How about right now?”***

--> What information do you want the Learner to have recorded on the Storyboard at the next coaching cycle?

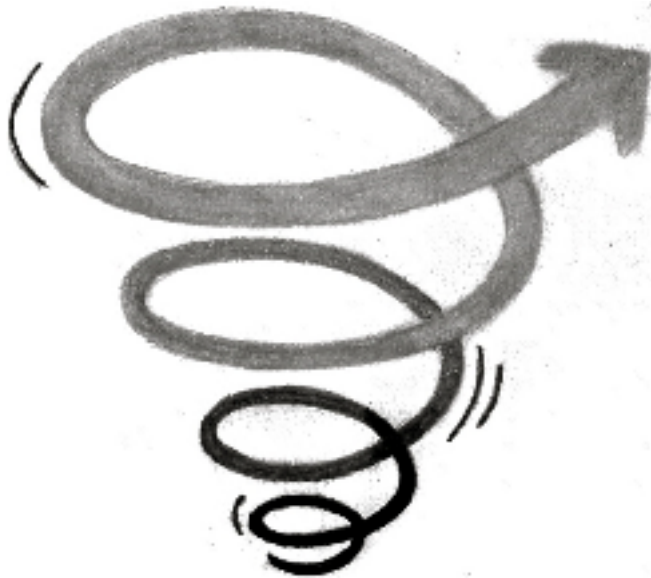
KEY POINTS FOR QUESTION 5

- ❑ Question 5 can be tricky. New coaches often incorrectly think they are asking, *“When will you have it done?”* But Question 5 is more about scheduling the next coaching cycle to see *“What are we learning?”*

Caution! Even when the coach asks Question 5 with the correct intention, the learner may still think s/he is being asked, *“When will you have it done?”*

- ❑ You and the Learner should agree on what data and information the Learner should obtain, prepare and bring to the next coaching cycle.
- ❑ Experiments should be done as cheaply and as quickly as possible. The coach should ask, *“Can we take this step right now?”*
- ❑ Let the Learner fail at certain points, then teach. A learner has to stumble in order to learn new skills.
- ❑ Since you don’t know what the actual result of the next step will be, both you and the Learner will need to go and see (check) in the next coaching cycle.





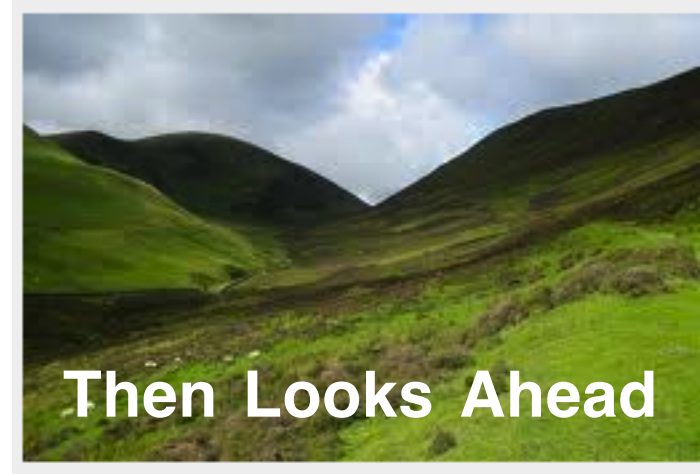
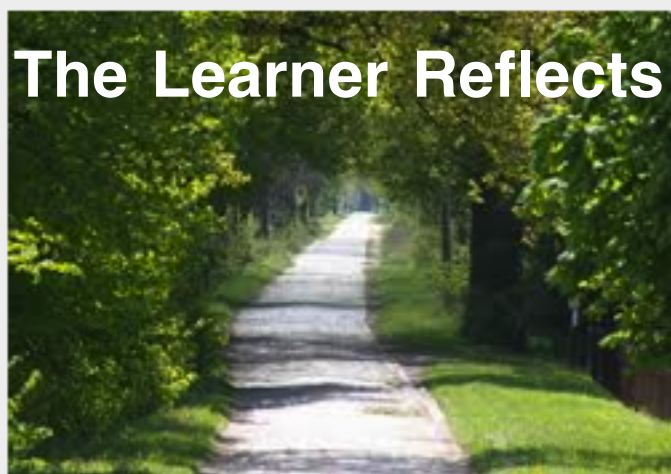
ON THE ACHIEVE-BY DATE THE OVERALL IMPROVEMENT KATA PATTERN REPEATS

At some point the Learner will reach the target condition achieve-by date and often, but not always, have achieved his/her target condition. At this time you should coach the Learner through the overall Improvement Kata pattern again. Specifically, have the Learner:

- Do a summary reflection, i.e. a major reflection over the entire process. This can lead to lots of learning that may be applied in the next cycle through the Improvement Kata pattern.

Then:

- Revisit the overall direction or challenge
- Grasp the current condition as it stands now
- Establish the next target condition



Remember, it will most likely take several successive target conditions in order to achieve the challenge.



QUESTIONS FOR THE ACHIEVE-BY DATE SUMMARY REFLECTION



--> Have the Learner to reflect on and evaluate how s/he worked:

- *“Why are we using the Improvement Kata pattern?”*
- *“What did we gain by doing that?”*
- *“What went well?”*
- *“What could be better?”*
- *“What aspects of the Improvement Kata should we work on next time?”*

