

# Physics and Ragdoll Core Mechanics Workbook - Build Accuracy

Physics and Ragdoll | Build Accuracy | Asset ID GAME-25-02-03

**Player goal: make fewer deliberate inputs with a clear target. Success means you can raise clean actions as a share of all attempts.**

## How to use this download

This is a genre-level learning resource, so it works across original browser games that share physics and ragdoll mechanics. Read one section, test it in a short session, and write down what happened. Keep the part that helped; change the part that did not.

| Planning field | Write or choose                                    |
|----------------|----------------------------------------------------|
| Category       | Physics and Ragdoll                                |
| Resource       | Core Mechanics Workbook                            |
| Player goal    | Build Accuracy                                     |
| Session length | Choose 10, 20 or 30 minutes                        |
| Baseline       | Record one normal attempt before changing anything |
| Review rule    | Change one variable, then compare like with like   |

## Category fundamentals

The useful starting point in Physics and Ragdoll games is to predict force, angle and collision instead of relying on random retries. These six fundamentals give your practice a clear order.

| # | Fundamental       | Player cue                  |
|---|-------------------|-----------------------------|
| 1 | Force direction   | Notice it before acting     |
| 2 | Launch angle      | Practise it slowly          |
| 3 | Timing            | Name the cue                |
| 4 | Momentum transfer | Use it in one safe attempt  |
| 5 | Collision reading | Record one result           |
| 6 | Controlled retry  | Retest under light pressure |

## Before the first attempt

- Write the exact result you want from this session.
- Check the game's own rules and controls; this guide does not replace them.
- Pick one metric from page 3. More numbers are not automatically better.
- Reduce speed, mark the target and count clean attempts rather than total attempts.
- Stop the session while you can still describe what changed.

## Core Mechanics Workbook

Rate each mechanic from 1 to 5 after a normal attempt. Pick the lowest useful skill, run one drill, then rate it again. This makes the workbook a test rather than a confidence survey.

| Mechanic          | Rating  | Observable cue         | Focused test                                          |
|-------------------|---------|------------------------|-------------------------------------------------------|
| Force direction   | ___ / 5 | I notice it when _____ | Next test: use minimum force first                    |
| Launch angle      | ___ / 5 | I notice it when _____ | Next test: compare two launch angles                  |
| Timing            | ___ / 5 | I notice it when _____ | Next test: trigger at one fixed moment                |
| Momentum transfer | ___ / 5 | I notice it when _____ | Next test: move one object without disturbing another |
| Collision reading | ___ / 5 | I notice it when _____ | Next test: predict the first collision                |
| Controlled retry  | ___ / 5 | I notice it when _____ | Next test: change only one variable per retry         |

### Mechanic breakdown

- Trigger: what appears just before the action?
- Decision: what are the two main options?
- Input: what is the smallest command needed?
- Feedback: what proves the action worked?
- Recovery: what is the safe next move if it fails?

## Physics and Ragdoll Practice Lab

Pick one drill. Run a normal attempt first, then three focused attempts, then one normal attempt again. The final attempt shows whether the practice transferred back into play.

| # | Drill                                      | Skill tested      | Record                 | Result        |
|---|--------------------------------------------|-------------------|------------------------|---------------|
| 1 | Use minimum force first                    | Force direction   | Successful predictions | Result: _____ |
| 2 | Compare two launch angles                  | Launch angle      | Variables changed      | Result: _____ |
| 3 | Trigger at one fixed moment                | Timing            | Attempts per solution  | Result: _____ |
| 4 | Move one object without disturbing another | Momentum transfer | Controlled landings    | Result: _____ |
| 5 | Predict the first collision                | Collision reading | Unintended collisions  | Result: _____ |
| 6 | Change only one variable per retry         | Controlled retry  | Successful predictions | Result: _____ |

## Common traps and a cleaner response

| Trap                                     | Cleaner response                                        |
|------------------------------------------|---------------------------------------------------------|
| Maxing out force                         | Pause at the trigger and state the intended action.     |
| Changing angle and timing together       | Return to one dependable input before rebuilding speed. |
| Ignoring secondary collisions            | Use a fixed marker, route or rule for the next test.    |
| Retrying before watching the result      | Compare the attempt with the same starting state.       |
| Aiming at the target instead of the path | End the run, write the cause and reset deliberately.    |

## Small signal dashboard

Choose one main signal for the week. A score can rise while decision quality gets worse, so keep one behaviour measure beside the result.

| Signal                 | Start           | Latest         | Decision             |
|------------------------|-----------------|----------------|----------------------|
| Successful predictions | Baseline: _____ | Current: _____ | Keep / change: _____ |
| Variables changed      | Baseline: _____ | Current: _____ | Keep / change: _____ |
| Attempts per solution  | Baseline: _____ | Current: _____ | Keep / change: _____ |
| Controlled landings    | Baseline: _____ | Current: _____ | Keep / change: _____ |
| Unintended collisions  | Baseline: _____ | Current: _____ | Keep / change: _____ |

## Session Sheet for Build Accuracy

Today's focus is to make fewer deliberate inputs with a clear target. Reduce speed, mark the target and count clean attempts rather than total attempts.

| Session field      | Entry                                        |
|--------------------|----------------------------------------------|
| Player or initials | _____                                        |
| Date and game      | _____                                        |
| Input method       | Keyboard / touch / gamepad / other           |
| Session target     | _____                                        |
| Main signal        | Successful predictions                       |
| Comfort check      | Visual / audio / motion / reach / break plan |

## Twenty-minute practice shape

| Time      | Action                                                             |
|-----------|--------------------------------------------------------------------|
| 0-2 min   | Warm up with familiar inputs. No score target.                     |
| 2-7 min   | Focused drill: Use minimum force first.                            |
| 7-12 min  | Focused drill: Compare two launch angles.                          |
| 12-17 min | Return to normal play and use the skill only when its cue appears. |
| 17-20 min | Record the result, one cause and the next test.                    |

## Attempt log

| Attempt | Outcome       | Observation        | Decision           |
|---------|---------------|--------------------|--------------------|
| 1       | Result: _____ | Cue noticed: _____ | Next change: _____ |
| 2       | Result: _____ | Cue noticed: _____ | Next change: _____ |
| 3       | Result: _____ | Cue noticed: _____ | Next change: _____ |
| 4       | Result: _____ | Cue noticed: _____ | Next change: _____ |
| 5       | Result: _____ | Cue noticed: _____ | Next change: _____ |

## Close the session

- What improved when I slowed down? \_\_\_\_\_
- Where did the first avoidable error begin? \_\_\_\_\_
- What setting or instruction should stay the same next time? \_\_\_\_\_
- Next session's single focus: \_\_\_\_\_

## Controls, Comfort and Accessibility Lab

A strong setup removes friction without playing the game for you. Record the current setup, change one option and replay the same short section before deciding what to keep.

| Area           | One option to test                         | Question after the replay                    |
|----------------|--------------------------------------------|----------------------------------------------|
| Visual clarity | Text size, contrast, effects or camera     | Can I read the next cue in time?             |
| Audio clarity  | Cue balance, captions or output device     | Can I identify the useful sound comfortably? |
| Input reach    | Binding, grip, gesture area or handedness  | Can I repeat the input without strain?       |
| Motion comfort | Camera speed, shake, blur or field of view | Can I track movement without discomfort?     |
| Session pace   | Pause points, reminders or break length    | Can I finish focused rather than fatigued?   |
| Interface load | Notifications, clutter or pointer size     | Is the objective easier to find?             |

## One-change comparison

| Test field             | Record                               |
|------------------------|--------------------------------------|
| Short test section     | _____                                |
| Original setting       | _____                                |
| Single change          | _____                                |
| Old result             | Successful predictions: _____        |
| New result             | Successful predictions: _____        |
| Comfort before / after | ___ / 5 ___ / 5                      |
| Decision               | Keep / revise / restore / test again |

## Stop-and-adjust signals

- Repeated wrong inputs after slowing down
- Text, targets or hazards remain hard to distinguish
- Headache, eye strain, dizziness, numbness or pain
- Audio is uncomfortable or masks the cue you need
- Frustration makes the next attempt less deliberate

## Physics and Ragdoll Scenario Cards

Use these cards away from a live attempt first. Say what you notice, choose one action and name the evidence that would make you change course. There is rarely one universal answer; the value is in making the decision visible.

| # | Situation                                                          | First question          | Small response                                  |
|---|--------------------------------------------------------------------|-------------------------|-------------------------------------------------|
| 1 | The opening plan stops working earlier than expected.              | Check force direction   | Use: use minimum force first                    |
| 2 | A tempting reward appears while the safe route is still available. | Check launch angle      | Use: compare two launch angles                  |
| 3 | One mistake has just broken the rhythm of the run.                 | Check timing            | Use: trigger at one fixed moment                |
| 4 | The useful cue is visible, but the input keeps arriving late.      | Check momentum transfer | Use: move one object without disturbing another |
| 5 | The result improves once, then drops on the next two attempts.     | Check collision reading | Use: predict the first collision                |
| 6 | You have enough time for only one more focused attempt.            | Check controlled retry  | Use: change only one variable per retry         |

## Work one card fully

| Decision field       | Notes                                                           |
|----------------------|-----------------------------------------------------------------|
| Chosen card          | _____                                                           |
| What is known        | _____                                                           |
| What is assumed      | _____                                                           |
| Safe option          | _____                                                           |
| Higher-risk option   | _____                                                           |
| My choice and reason | _____                                                           |
| Evidence to watch    | Variables changed: _____                                        |
| Goal connection      | This helps me make fewer deliberate inputs with a clear target. |

## Debrief

- What did I notice early enough? \_\_\_\_\_
- Which assumption was wrong? \_\_\_\_\_
- Did the result come from the decision or the input? \_\_\_\_\_
- What would make the safer option too passive? \_\_\_\_\_

## Seven-Session Evidence Tracker

Use the same main signal for all seven sessions. The purpose is to see whether work on build accuracy transfers into normal play, not to manufacture a perfect upward line.

| Session | Focus             | Signal                 | Result | One useful note |
|---------|-------------------|------------------------|--------|-----------------|
| 1       | Force direction   | Successful predictions | _____  | _____           |
| 2       | Launch angle      | Variables changed      | _____  | _____           |
| 3       | Timing            | Attempts per solution  | _____  | _____           |
| 4       | Momentum transfer | Controlled landings    | _____  | _____           |
| 5       | Collision reading | Unintended collisions  | _____  | _____           |
| 6       | Controlled retry  | Successful predictions | _____  | _____           |
| 7       | Force direction   | Variables changed      | _____  | _____           |

## Compare the pattern

| Review                 | Value | Context                      |
|------------------------|-------|------------------------------|
| Baseline result        | _____ | Conditions: _____            |
| Typical result         | _____ | Based on sessions: _____     |
| Best repeatable result | _____ | Repeated how often? _____    |
| Largest drop           | _____ | Likely trigger: _____        |
| Comfort pattern        | _____ | Break or setup change: _____ |

## Evidence-based decision

- Keep: the routine that produced a repeatable gain.
- Change: the smallest cause linked to the repeated error.
- Pause: a metric that adds logging but no useful decision.
- Next target: one behaviour and one result for the next seven sessions.

## Personal Playbook and Next-Step Plan

Finish by turning your notes into a short playbook you can actually remember. Write actions in your own words and keep only the cues that changed a decision or result.

| Moment        | My rule                                                  |
|---------------|----------------------------------------------------------|
| Before play   | I will check the objective, comfort and force direction. |
| Opening cue   | When I notice _____, I will test launch angle.           |
| Pressure rule | When the plan breaks, I will _____.                      |
| Recovery rule | After an error, I will use predict the first collision.  |
| Risk rule     | I will take the higher-risk option only when _____.      |
| Stop rule     | I will pause or finish when _____.                       |
| Review rule   | I will record successful predictions and one cause.      |

## Two-week continuation plan

| Session   | Practice                                   | Purpose                       |
|-----------|--------------------------------------------|-------------------------------|
| Session 1 | Use minimum force first                    | Set a clean baseline          |
| Session 2 | Compare two launch angles                  | Repeat one visible cue        |
| Session 3 | Trigger at one fixed moment                | Apply under light pressure    |
| Session 4 | Move one object without disturbing another | Retest the weak section       |
| Session 5 | Predict the first collision                | Check transfer to normal play |
| Session 6 | Change only one variable per retry         | Review: Build Accuracy        |

### Completion review

- I can now raise clean actions as a share of all attempts: yes / partly / not yet
- The clearest evidence is: \_\_\_\_\_
- The most useful page in this workbook was: \_\_\_\_\_
- My next small target is: \_\_\_\_\_

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